

Appendix C  
**DOE Comment Letter**  
**Water Rights Certificates**  
**Well Logs**



COPY

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

July 14, 2011

RECEIVED

JUL 15 2011

CITY OF MILLWOOD

Mr. Cleve McCoul  
Town of Millwood  
9103 East Frederick  
Spokane, WA 99206

Dear Mr. McCoul:

Re: Town of Millwood; PWS ID # 54850Q; Whitman County  
Water System Plan; DOH Project #11-0611

I have reviewed the above referenced document under the requirement of the 2007 *Memorandum of Understanding* between Department of Health and Department of Ecology. Ecology's review is focused only on the water right and related issues affecting the submitted report.

Town of Millwood has five water right certificates: 1813-A, 2045-A, 3744-A, 4139-A and G3-26769. The water right status tables in the report (Table 5-3 and 5-4) listed only three water rights. However, all five copies of water right certificates are included in the Appendix C. I appreciate that. I have made the modified version for the water right status table which is attached with this letter for your reference. The system has adequate water rights to meet existing and projected 20-year water needs.

These are my comments at this time. Please don't hesitate to contact me should you have any questions regarding this letter. I can be reached at (509) 329-3451 or by email at [yifu461@ecy.wa.gov](mailto:yifu461@ecy.wa.gov).

Sincerely,

Ying Fu  
Water Resources Program

YF: md  
Enclosure

cc: Heather Cannon, DOH  
Victoria Leuba, DOE/ERO/WR





CERTIFICATE RECORD No. 11 PAGE No. 1813-A

STATE OF WASHINGTON, COUNTY OF Spokane

*Old Park well*

### Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 283, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

THIS IS TO CERTIFY That TOWN OF MILLWOOD, WASHINGTON

~~is~~ \_\_\_\_\_, has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of a well

located within the NW 1/4 of NE 1/4 of Sec. 8, Twp. 25 N., Rge. 44 E.W.M.

for the purpose of municipal supply

under and subject to provisions contained in Ground Water Permit No. 2389 issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 1 at page 1813-A

that the right hereby confirmed dates from March 21, 1952; that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 1200 gallons per acre-foot per year to be used for municipal supply. ~~for irrigation~~

A description of the lands to which such ground water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

Town of Millwood, Spokane County, Washington.

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands and place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources

25th day of April, 1954.

*Chas. R. Bithorn*  
State Supervisor of Water Resources.

# Report of Examination on Ground Water

Received date 3-24-52 Date of exam. 4-8-52 Appli. No. 2404

Name Town of Millwood Address \_\_\_\_\_

Type of works well Dimensions 16" x 130'

Progress of works Drilling under way.

Quantity ~~recommended~~ applied for 1200 g.p.m. 1936 acre-feet per year

Legal sub. NW1/4 NW1/4 Sec. 8 Twp. 25 N. Rge. 44 E. County Spokane

Use municipal supply

Irrigation-acreage: Present \_\_\_\_\_ Planned \_\_\_\_\_ Feasible \_\_\_\_\_

Municipal: Population 1800 as of 1954

Industrial \_\_\_\_\_

Time pump will be operated continuously

Other water rights appurtenant to this land None known

Proximity to existing works, springs, wells, or streams Inland Empire Paper Co. N. 800'

Spokane River N. 1200'

Area \_\_\_\_\_ Sub-area \_\_\_\_\_ Zone \_\_\_\_\_

## RECOMMENDATIONS

Approved for 1200 g.p.m. 405 acre-feet per year, subject to existing water rights. (1 acre-foot 325,850 gallons.)

The quantity recommended is based on a daily requirement of 200 gallons per person or a total of 405 acre-feet yearly for 1800 persons.

The applicant will furnish information to this office as to the size and type of equipment installed and the gallons per minute furnished.

The installation of an access port to well as described in attached Ground Water Bulletin No. 1, is recommended.

Drilling operations were going on at the time of examination, though the casing was only down about 40'. Permit should issue as recommended, subject to existing rights and provisions. The applicant's attention is drawn to the fact that should this withdrawal cause interference with well or wells within a  $\frac{1}{4}$  mile radius the withdrawal rate may have to be reduced sufficient to prevent injurious affects to existing rights.

Signed this 12th day of August, 1952.

Fred D. Hahn  
FRED D. HAHN  
Engineer

2000

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

AMENDED

*Hedman  
well*

*update  
GW Cert.  
# 2045*

CERTIFICATE OF CHANGE OF GROUND WATER CERTIFICATE NO. 2045-A

In accordance with the provisions of Chapter 263, Laws of Washington for 1945 and the regulations of the Department of Ecology.

THIS IS TO CERTIFY That the Town of Millwood, Washington has complied with all of the requirements of the Revised Code of Washington 90.44.100 and the regulations of the Department of Ecology, and is hereby granted the right to add one (1) additional point of withdrawal to Ground Water Certificate No. 2045-A.

That the use of such water is for a municipal supply for the community of Millwood in the amount of 500 gallons per minute, 640 acre feet per year.

That the present place of use is the Town of Millwood.

That the original point of withdrawal was located within Lot 8, Block 3, Hedman's Addition to the Town of Millwood in Sec. 7, T. 25 N., R. 44 E.W.M., Spokane County, Washington, and is now abandoned.

That the new point of withdrawal is a well located within the N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$  of Sec. 8, T. 25 N., R. 44 E.W.M., Spokane County, Washington.

GIVEN UNDER MY HAND AND SEAL of this office at Spokane, Washington this 30th day of April, 1985.

ANDREA BEATTY RINIKER; Director  
Department of Ecology

by \_\_\_\_\_  
JOHN L. ARNQUIST, Regional Manager

RECORDED:

VOL. 1-3, PP. 423

CERTS. OF CHANGE

CERTIFICATE RECORD NO. 5 PAGE NO. 2045

STATE OF WASHINGTON, COUNTY

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 122, Laws of Washington for 1929, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

This is to Certify That JOHN OF HILL ROAD, WASHINGTON

has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of a well

located within Lot 6, Block 3 of Addition to Town of Hill Road, Sec. 7, Twp.

R. 1, S. 1, E. 1, W. 1

for the purpose of municipal supply

under and subject to provisions contained in Ground Water Permit No. 1261 issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 5 at page 2045

that the right hereby confirmed dates from 1929, 12, 1929; that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 500 gallons per acre-foot per year for municipal supply.

A description of the lands to which such ground water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

Lot 6 in Hill Road, Spokane County, Washington.

Right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

W. W. VESS the seal and signature of the State Supervisor of Water Resources affixed this

14th day of November, 1934

W. W. Vess State Supervisor of Water Resources

# Report Examination on Ground Water

Received date 4-22-54 Date of exam 5-18-54 Appl. No. 1593  
 Name Town of Millwood Address Millwood, Wash.  
 Type of work Well #2 Dimensions Dug well 6'x70'  
drilled an add. 50' with  
18" dia. casing  
 Progress of work Complete and in use  
 Quantity ~~recommended~~ 500 g.p.m. 800 acre-feet per year  
 applied for  
Blk. 3 Hedman's Add. to Town of Millwood  
 Legal sub Lot 6/ Sec 7 Twp. 25 N. Rge. 4 E. County Spokane  
 Use Municipal supply

Irrigation-screage: Present \_\_\_\_\_ Planned \_\_\_\_\_ Feasible \_\_\_\_\_  
 Municipal: Population 1683 as of 1954  
2000 as of 1960  
 Industrial \_\_\_\_\_  
 Time pump will be operated Continuously  
 Other water rights appurtenant to this land G. W. Certificate #1813  
 Proximity to existing works, springs, wells, or streams \_\_\_\_\_

Area \_\_\_\_\_ Sub-area \_\_\_\_\_ Zone \_\_\_\_\_

## RECOMMENDATIONS

Approved for 500 g.p.m. 640 acre-feet per year, subject to existing water rights. (1 acre-foot 325,850 gallons.)

The total annual withdrawal recommended above was calculated on the basis of an average of 400 g.p.m. being required continuously for the domestic requirements of this community. This figure represents the actual average found through service to the present population.  
 Since the Town of Millwood presently enjoys ground water Certificate #1813 for the withdrawal of 1000 g.p.m. and 405 acre-feet per year from well #1, this application should be approved subject to the following provision:  
 "The total withdrawal authorized from well #2 shall be limited to 640 acre-feet per year, less any quantity available from well #1."

The installation of an access port to well as described in attached Ground Water Bulletin No. 1, is recommended.

Signed this 6th day of July, 1954.  
Glen H. Fiedler  
 GLEN H. FIEDLER, Engineer  
 Division of Water Resources

CERTIFICATE RECORD No. 9 PAGE No. 4139-A

STATE OF WASHINGTON, COUNTY OF Spokane

*Bother Well*

### Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

THIS IS TO CERTIFY That TOWN OF MILLWOOD, WASHINGTON

~~xxx~~ \_\_\_\_\_, has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of a well located within lot 10, Block 9 of Grandview Acres Addition to Millwood Sec. 5, Twp. 25 N., R. 44 E.W.M. for the purpose of municipal supply including fire protection under and subject to provisions contained in Ground Water Permit No. 5075 issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 9 at page 4139-A; that the right hereby confirmed dates from March 20, 1959; that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed 500 gallons per minute; 800 acre-feet per year for municipal supply including fire protection.

Special provisions required by the Supervisor of Water Resources: \_\_\_\_\_

A description of the lands to which such ground water right is appurtenant:

Town of Millwood, Spokane County, Washington.

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 21st day of February, 1962.

*M. G. Walker*  
State Supervisor of Water Resources.

# Report of Examination on Ground Water

Received date 3-20-59 Date of exam 4-29-59 Appl. No. 5174

Name Town of Millwood Address Town Hall, Millwood, Wash.

Type of works well Dimensions 16"x130'

Progress of works well drilled

Quantity applied for 500 g.p.m. 800 acre-feet per year

Lot 10, Blk. 9 of Grandview Acres Add. to Millwood

Legal sub Sec. 5 Twp. 25 N. Rge. 44 E. County Spokane

Use municipal supply; including fire protection

Irrigation-acreage: Present                      Planned                      Feasible                     

Municipal: Population 2000 as of 1960

Industrial                     

Time pump will be operated continuously

Other water rights appurtenant to this land G. W. Cert. #1813 and 2045

Proximity to existing works, springs, wells, or streams none reported

Area                      Sub-area                      Zone                     

## RECOMMENDATIONS

Approved for 500 g.p.m. 800 acre-feet per year, subject to existing

water rights. (1 acre-foot 325,850 gallons.)

The installation of an access port to well as described in attached Ground Water Bulletin No. 1 is recommended.

The applicant will furnish information to this office as to the size and type of equipment installed and the gallons per minute furnished. The size of hole openings and number of sprinklers, if such be the case, will give this information.

According to the estimated daily water requirement of 1,700,000 gallons per day, there is a need for 2068 acre-feet annually which includes a 10% increased use factor. The present rights allow a withdrawal of only 640 acre-feet and this coupled with the 800 acre-feet of the pending application would still leave a deficit of 628 acre-feet.

The applicant has been advised to file for 700 g.p.m. additional water from the Hedman Well (Cert. 2045) and the deficit in acre-feet can also be taken up in the new filing.

Signed this 20th day of November, 1959.

**EUGENE F. WALLACE, Geologist**  
Division of Water Resources

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

AMENDED

*update  
G.W. Cert.  
Hedman well (2nd cert) # 3744*

CERTIFICATE OF CHANGE OF GROUND WATER CERTIFICATE NO. 3744-A

In accordance with the provisions of Chapter 263, Laws of Washington for 1945 and the regulations of the Department of Ecology.

THIS IS TO CERTIFY That the Town of Millwood, Washington has complied with all of the requirements of the Revised Code of Washington 90.44.100 and the regulations of the Department of Ecology, and is hereby granted the right to add one (1) additional point of withdrawal to Ground Water Certificate No. 3744-A.

That the use of such water is for a municipal supply for the community of Millwood in the amount of 600 gallons per minute, 960 acre feet per year.

That the present place of use is the Town of Millwood.

That the original point of withdrawal was located within Lot 8, Block 3, Hedman's Addition to the Town of Millwood in Sec. 7, T. 25 N., R. 44 E.W.M., Spokane County, Washington, and is now abandoned.

That the new point of withdrawal is a well located within the N1/4N1/4NW1/4 of Sec. 8, T. 25 N., R. 44 E.W.M., Spokane County, Washington.

GIVEN UNDER MY HAND AND SEAL of this office at Spokane, Washington this 30th day of April, 1985.

ANDREA BEATTY RINIKER, Director  
Department of Ecology

by JOHN L. ARNQUIST, Regional Manager

RECORDED:

VOL. 1-3, PP. 424

CERTS. OF CHANGE



# Report of Examination on Ground Water

Received date 1/26/60 Date of exam. 4/13/60 Appli. No. 5476

Name Town of Millwood Address Town Hall, Millwood, Washington

Type of works well Dimensions Dug well 6' to 70' depth. Drilled additional 50' with 18" diam. casing. Depth 120'.

Progress of work Complete and operational

Quantity applied for 700 g.p.m. \_\_\_\_\_ acre-feet per year

Lot 8, Block 3, Hedman's Add.

Legal sub. Sec. 7 Twp. 25 N. Rge. 44 E. County Spokane

Use municipal supply

Irrigation-acreage: Present \_\_\_\_\_ Planned \_\_\_\_\_ Feasible \_\_\_\_\_

Municipal: Population 2000 as of 1965

Industrial \_\_\_\_\_

Time pump will be operated continuously

Other water rights appurtenant to this land see list below

Proximity to existing works, springs, wells, or streams: \_\_\_\_\_

Area \_\_\_\_\_ Sub-area \_\_\_\_\_ Zone \_\_\_\_\_

## RECOMMENDATIONS

Approved for 700 g.p.m. 1120 acre-feet per year, subject to existing

water rights. (1 acre-foot=325,850 gallons.) The installation of an access port to well as described in attached Ground Water Bulletin No. 1 is recommended.

The water requirement of the Town of Millwood is based upon a daily demand of 1,700,000 gallons (Town of Millwood estimate) or 1080 acre-feet annually. A ten per cent allowance for growth would increase the estimated annual requirement to 2068 acre-feet (see letter of November 20, 1959— Eugene F. Wallace, Geologist, Division of Water Resources, to the Town of Millwood).

A list of permits and certificates of water rights held by the Town of Millwood follows:

G.W. Cert. #1813 (#1 Center) for 1200 gpm; 405 acre-feet/year

G.W. Cert. #2045 (Hedman well) for 500 gpm; 640 acre-feet/year (405 acre-feet/year-supplemental)

G.W. Permit #5075 (Granoview well) for 500 gpm; 800 acre-feet/year

In view of the facts that the Town of Millwood's estimated water requirement is 2068 acre-feet annually, and they now hold title to 1440 acre-feet/year as a primary right; permit shall issue, under this application for 700 gpm; 1120 acre-feet/year—628 acre-feet/year as a primary right to bring the total to 2068 acre-ft./yr. and 492 acre-feet/year as a supplemental right.

The approval of this application for permit will be subject to the provision that: "The total annual withdrawal under all rights will be limited to 2068 acre-feet."

It should be noted that this filing represents the second appropriation from this well. Ground Water Certificate No. 2045 authorizes the withdrawal of 500 gallons per minute, and subject applications is for the withdrawal of an additional 700 gallons per minute—a total of 1200 gallons per minute available from the Hedden well.

  
William R. Smith, Geologist

Signed this 22nd day of April, 1960  
Division of Water Resources

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

*New Park  
Well*

CERTIFICATE OF WATER RIGHT

- Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE <b>January 14, 1981</b>	APPLICATION NUMBER <b>G3-26769</b>	PERMIT NUMBER <b>G3-26769P</b>	CERTIFICATE NUMBER <b>G3-26769C</b>
--	---------------------------------------	-----------------------------------	--

NAME <b>TOWN OF MILLWOOD</b>			
ADDRESS (STREET) <b>E. 9103 Frederick</b>	(CITY) <b>Spokane</b>	(STATE) <b>Washington</b>	(ZIP CODE) <b>99206</b>

*This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.*

PUBLIC WATER TO BE APPROPRIATED

SOURCE <b>a well</b>	TRIBUTARY OF (IF SURFACE WATERS)		
-------------------------	----------------------------------	--	--

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE <b>2200</b>	MAXIMUM ACRE-FEET PER YEAR <b>3520</b>
-------------------------------	---	---

QUANTITY, TYPE OF USE, PERIOD OF USE  
**2200 gallons per minute, 3520 acre feet per year, continuously, for municipal supply.**

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL  
**2500 feet north and 400 feet east from the W 1/2 corner of Sec. 8**

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) <b>N 1/2 N 1/2 W 1/2</b>	SECTION <b>8</b>	TOWNSHIP N. <b>25</b>	RANGE, (E. OR W.) W.M. <b>44 E</b>	W.R.T.A. <b>57</b>	COUNTY <b>Spokane</b>
---	---------------------	--------------------------	---------------------------------------	-----------------------	--------------------------

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

**Area served by the Town of Millwood.**

PROVISIONS

Total amount of water to be withdrawn under this certificate shall be 2200 gallons per minute, 3520 acre feet per year, LESS that amount of water withdrawn under Ground Water Certificate Nos. 2045-A together with Amended Certificate of Change No. 1-3-423 and 3744-A together with Amended Certificate of Change No. 1-3-424.

At such time that the Department of Ecology determines that regulation and management of the subject waters is necessary and in the public interest, an approved measuring device shall be installed and maintained in accordance with RCW 90.03.360 or WAC 508-64-020 through WAC 506-64-040.

The amount of water granted is a maximum limit that shall not be exceeded and the water user shall be entitled only to that amount of water within the specified limit that is beneficially used and required.

This authorization to make use of public waters of the state is subject to existing rights, including any existing rights held by the United States for the benefit of Indians under treaty or otherwise.

Maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An airline and gage may be installed in addition to the access port.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at **Spokane** Washington, this **17th** day of **July**, 19**85**.

ANDREA BEATTY RINIKER, Director  
Department of Ecology

ENGINEERING DATA

OK *NSA*

by *John L. Arnquist*  
JOHN L. ARNQUIST, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION  
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE January 14, 1981	APPLICATION NUMBER G3-26769	PERMIT NUMBER	CERTIFICATE NUMBER
-----------------------------------	--------------------------------	---------------	--------------------

NAME  
TOWN OF MILLWOOD

ADDRESS (STREET) ADDRESS (CITY) ADDRESS (STATE) ADDRESS (ZIP CODE)  
E. 9103 Frederick Spokane Washington 99206

PUBLIC WATERS TO BE APPROPRIATED

SOURCE  
a well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 2200	MAXIMUM ACRE-FEET PER YEAR 3520
-------------------------------	------------------------------------	------------------------------------

QUANTITY, TYPE OF USE, PERIOD OF USE:  
2200 gallons per minute, 3520 acre feet per year, continuously, for municipal supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL  
2500 feet north and 400 feet east from the ~~SE~~ corner of Sec. 8.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) BENTON	SECTION 8	TOWNSHIP N. 25	RANGE, (E. OR W.) W.M. 44 E.	W.R.I.A. 57	COUNTY Spokane
---	--------------	-------------------	---------------------------------	----------------	-------------------

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by the Town of Millwood.

**DESCRIPTION OF PROPOSED WORKS**

Drilled well, pump, transmission and distribution system.

**DEVELOPMENT SCHEDULE**

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Started	October 1, 1984	October 1, 1985

**REPORT**

**BACKGROUND**

An application to appropriate public ground water was submitted by the Town of Millwood to the Department of Ecology on January 14, 1981. The application was accepted and assigned Ground Water Application No. G3-26769. The applicant proposes to withdraw water from a well in the amount of 2200 gallons per minute for a municipal supply. The proposed point of withdrawal is to be located within the NE 1/4 of Sec. 8, T. 25 N., R. 44 E.W.M.

A notice of application was duly published in accordance with RCW 90.03.280; no protests or objections were received.

This application is categorically exempt from the provisions of the State Environmental Policy Act (SEPA) of 1971, Chapter 43.21C RCW.

**INVESTIGATION**

A field investigation was conducted on January 12, 1982 by this writer with Dave South, Utilities Superintendent. The Town of Millwood is located in the Spokane Valley adjacent to the south bank of the Spokane River.

Following is a list of ground water certificates held by the Town of Millwood for municipal supply:

- Ground Water Certificate No. 1813-A "Park" Well for 1200 GPM, 405 AF/YR
- Ground Water Certificate No. 2045-A "Hedman" Well for 500 GPM, 640 AF/YR  
(405 AF/YR - Supplemental)
- Ground Water Certificate No. 3744-A "Hedman" Well for 600 GPM, 960 AF/YR  
(332 AF/YR - Supplemental)
- Ground Water Certificate No. 4139-A "Butler" Well for 500 GPM, 800 AF/YR

The proposed well was constructed between May and July, 1981 with department authorization because the "Hedman" well was contaminated. Certificates Nos. 2045-A and 3744-A are both the authority for withdrawal from the "Hedman" well. Change authorizations were issued to the town on December 3, 1983 to add the subject point of withdrawal to Ground Water Certificates No. 2045-A and 3744-A. A proof of appropriation examination of the project will be made prior to the issuance of Certificates of Change to the above rights. The town can withdraw up to 1100 gallons per minute, 1600 acre feet per year from this new well under existing rights.

The closest existing certificated well other than the town's is located approximately 300 yards north and it is operated by the Inland Empire Paper Company.

According to the water well report, the town's new well is 196 feet in depth by 13 inches in diameter. Casing is installed to 175 feet with a screen installed from 175 to 196 feet. The static water level was 51.85 feet below the top of the well as measured by this examiner.

Wells in this area penetrate the Spokane-Rathdrum Aquifer which was designated as a "Sole Source" of water supply for the Spokane-Coeur d'Alene area by the U.S. Environmental Protection Agency. The aquifer is composed predominantly of glacio-fluvial deposits. The deposits consist mostly of unconsolidated, poorly to moderately sorted sands and gravels with some beds of cobbles and boulders and a few scattered clay lenses. Total flow of the aquifer at the Idaho-Washington State line is estimated to be 970 cubic feet per second. The aquifer discharges to the Spokane River in the area of the proposed point of withdrawal. There is no expected interference with other wells in the area.

A review of the Abbreviated Water System Plan for the Town of Millwood by Larry A. Esvelt of Esvelt Environmental Engineering indicates that the town is not in conformance with its existing rights. Changes to all or some of the certificates need to be initiated by the Town of Millwood in order to follow the recommendations of the plan and to legalize what the town is actually doing. The department can not "reword" existing rights as suggested in the report, without proper application. It is recommended that the town contact this writer for further information.

The current maximum amount of public waters that the town can withdraw from four (4) wells is 2800 gallons per minute, 2068 acre feet per year and of this amount 1100 gallons per minute, 1600 acre feet per year can be taken from the subject well. Therefore, this application for 2200 gallons per minute will increase the town's instantaneous supply by 1100 gallons per minute and add 1920 acre feet per year for municipal supply.

The Department of Social and Health Services states in a letter of April 3, 1981, from George Schlender that they have no objections to the issuance of a permit under this application.

#### CONCLUSIONS AND RECOMMENDATIONS

It is the conclusion of this examiner that: public ground water is available for appropriation for a beneficial use; that a municipal supply is a beneficial use; that the appropriation of such water will not impair existing rights or be detrimental to the public welfare.

At 2200 gallons per minute, the total amount of water that can be pumped in one (1) year, is 3520 acre feet. Total existing rights will be for the withdrawal of 3900 gallons per minute from four (4) wells, unless the "Redman" well is abandoned and then it will be from three (3) wells, in an annual amount of 3988 acre feet per year for municipal supply. These amounts are adequate for the current and projected requirements of the Town of Millwood.

It is recommended that this application for a public ground water permit be approved in the amount of 2200 gallons per minute, 3520 acre feet per year, for municipal supply. LESS that amount of water withdrawn under Ground Water Certificate Nos. 2045-A and 3744-A, subject to the following provisions:

"Total amount of water to be withdrawn under this permit shall be 2200 gallons per minute, 3520 acre feet per year, LESS that amount of water withdrawn under Ground Water Certificate Nos. 2045-A and 3744-A."

"At such time that the Department of Ecology determines that regulation and management of the subject waters is necessary and in the public interest, an approved measuring device shall be installed and maintained in accordance with RCW 90.03.360 or WAC 508-64-020 through WAC 508-64-040."

"The amount of water granted is a maximum limit that shall not be exceeded and the water user shall be entitled only to that amount of water within the specified limit that is beneficially used and required."

"This authorization to make use of public waters of the state is subject to existing rights, including any existing rights held by the United States for the benefit of Indians under treaty or otherwise."

"A certificate of water right will not be issued until a final examination is made."

"Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An airline and gage may be installed in addition to the access port."

"All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells)."

"A well log of the completed well shall be submitted by the driller to the Department of Ecology within thirty (30) days of completion of this well. This well log shall be complete and all information concerning the static water level in the completed well in addition to any pump test data shall be submitted as it is obtained."

Signed at Spokane, Washington  
this 27th day of April, 1983

/s/ Rynear R. Huffman, Jr.   
RYNEAR R. HUFFMAN, JR.  
Resource Management Division  
Department of Ecology

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

AMENDED

CERTIFICATE OF CHANGE OF GROUND WATER CERTIFICATE NO. 2045-A

In accordance with the provisions of Chapter 263, Laws of Washington for 1945 and the regulations of the Department of Ecology.

THIS IS TO CERTIFY That the Town of Millwood, Washington has complied with all of the requirements of the Revised Code of Washington 90.44.100 and the regulations of the Department of Ecology, and is hereby granted the right to add one (1) additional point of withdrawal to Ground Water Certificate No. 2045-A.

That the use of such water is for a municipal supply for the community of Millwood in the amount of 500 gallons per minute, 640 acre feet per year.

That the present place of use is the Town of Millwood.

That the original point of withdrawal was located within Lot 8, Block 3, Hedman's Addition to the Town of Millwood in Sec. 7, T. 25 N., R. 44 E.W.M., Spokane County, Washington, and is now abandoned.

That the new point of withdrawal is a well located within the N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$  of Sec. 8, T. 25 N., R. 44 E.W.M., Spokane County, Washington.

GIVEN UNDER MY HAND AND SEAL of this office at Spokane, Washington this 30th day of April, 1985.

ANDREA BEATTY RINIKER, Director  
Department of Ecology

by John L. Arnquist  
JOHN L. ARNQUIST, Regional Manager

RECORDED:

VOL. 1-3, PP. 423

CERTS. OF CHANGE

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
APPLICATION FOR CHANGE  
REPORT OF EXAMINATION  
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE <b>April 22, 1954</b>	APPLICATION NUMBER <del>5476</del> <b>3593</b>	PERMIT NUMBER <b>3367</b>	CERTIFICATE NUMBER <b>2045-A</b>
--	--	------------------------------	-------------------------------------

NAME <b>TOWN OF MILLWOOD</b>			
ADDRESS (STREET) <b>E. 9103 Frederick</b>	(CITY) <b>Spokane</b>	(STATE) <b>Washington</b>	(ZIP CODE) <b>99206</b>

PUBLIC WATERS TO BE APPROPRIATED

SOURCE  
**Two (2) wells (an existing well and an additional well under this change)**

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE <b>500</b>	MAXIMUM ACRE-FEET PER YEAR <b>640</b>
-------------------------------	--	--

QUANTITY, TYPE OF USE, PERIOD OF USE  
**500 gallons per minute, 640 acre feet per year, continuously, for municipal supply.**

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL  
**#1) Lot 8, Block 3, Hedman's Addition to the Town of Millwood in Sec. 7;**  
**#2) (Additional Point of Withdrawal) 100 feet south and 500 feet east from the NW corner of Sec. 8, within the ~~Millwood~~**

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) <b>BOTH WITHIN</b>	SECTION <b>7 &amp; 8</b>	TOWNSHIP N. <b>25</b>	RANGE, (E. OR W.) W.M. <b>44 E.</b>	W.R.I.A. <b>57</b>	COUNTY <b>Spokane</b>
---	-----------------------------	--------------------------	--	-----------------------	--------------------------

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

**Town of Millwood, Spokane County, Washington.**

## DESCRIPTION OF PROPOSED WORKS

Drilled well, pump and transmission mainline.

## DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Started	Completed	April 1, 1984

## REPORT

BACKGROUND

An application for change to add an additional point of withdrawal was submitted by the Town of Millwood to the Department of Ecology on January 14, 1981. The application was accepted and processed. The proposed additional point of withdrawal is to be located in the N<sup>1/2</sup>SW<sup>1/4</sup> of Sec. 8, T. 25 N., R. 44 E.W.M.

A notice of application was duly published in accordance with RCW 90.03.280; no protests or objections were received.

This application for change is categorically exempt from the provisions of the State Environmental Policy Act (SEPA) of 1971, Chapter 43.21C RCW.

INVESTIGATION

A field examination was conducted by this writer on January 12, 1982 with Dave South. Ground Water Certificate No. 3744-A, which is applicable to the existing well is also being processed for the same change. The reports will issue simultaneously.

Water Right Certificate No. 2045-A is the authority for 500 gallons per minute, 640 acre feet per year for a municipal supply from a well.

The existing well (Hedman) is contaminated and as a consequence, the Town requests an additional point of withdrawal. They do not want to abandon the existing well. However, the Abbreviated Town of Millwood Water System Plan, dated April, 1982, by Esvelt Environmental Engineering, states an intent to abandon the Hedman well for municipal water, do to contamination. The report further states that the well may be used as an irrigation well for the West Valley School District, which is not within the authorized place of use under this certificate.

In order for the Town of Millwood to provide water from this well outside the corporate town limits, a change in the legal place of use is required. Therefore, an application for change or a new application for permit will be required when the town intends to provide water to the school.

The proposed well has been constructed at the location requested. It is 196 feet in depth by 18 inches in diameter. Casing is installed to 175 feet with a screen installed from 175 to 196 feet. The well penetrates the Spokane-Rathdrum Aquifer, which consists of unconsolidated sand and gravel.

The static water level was measured at 51.85 feet.

CONCLUSIONS AND RECOMMENDATIONS

The proposed additional point of withdrawal is in the same aquifer, will not enlarge the water right and will not be injurious or detrimental to existing rights.

It is the conclusion and recommendation of this examiner that an additional point of withdrawal be authorized under Ground Water Certificate No. 2045-A, subject to the following provisions:

"A proof of appropriation examination of your project will be made prior to the issuance of a Certificate of Change. If the municipal use of the original well is discontinued, the Certificate of Change shall authorize the substitute well only."

"Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An airline and gage may be installed in addition to the access port."

"All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells)."

"A well log of the completed well shall be submitted by the driller to the Department of Ecology within thirty (30) days of completion of this well. This well log shall be complete and all information concerning the static water level in the completed well in addition to any pump test data shall be submitted as it is obtained." (Well log is on file with the department).

Signed at Spokane, Washington  
this 3rd day of December, 1982

/s/ Rynear R. Huffman, Jr.  
RYNEAR R. HUFFMAN, JR.  
Resource Management Division  
Department of Ecology

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

AMENDED

CERTIFICATE OF CHANGE OF GROUND WATER CERTIFICATE NO. 3744-A

In accordance with the provisions of Chapter 263, Laws of Washington for 1945 and the regulations of the Department of Ecology.

THIS IS TO CERTIFY That the Town of Millwood, Washington has complied with all of the requirements of the Revised Code of Washington 90.44.100 and the regulations of the Department of Ecology, and is hereby granted the right to add one (1) additional point of withdrawal to Ground Water Certificate No. 3744-A.

That the use of such water is for a municipal supply for the community of Millwood in the amount of 600 gallons per minute, 960 acre feet per year.

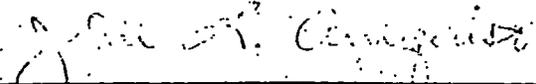
That the present place of use is the Town of Millwood.

That the original point of withdrawal was located within Lot 8, Block 3, Hedman's Addition to the Town of Millwood in Sec. 7, T. 25 N., R. 44 E.W.M., Spokane County, Washington, and is now abandoned.

That the new point of withdrawal is a well located within the N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$  of Sec. 8, T. 25 N., R. 44 E.W.M., Spokane County, Washington.

GIVEN UNDER MY HAND AND SEAL of this office at Spokane, Washington this 30th day of April, 1985.

ANDREA BEATTY RINIKER, Director  
Department of Ecology

by 

JOHN L. ARNQUIST, Regional Manager

RECORDED:

COL. 1-3, PP. 424

CERTS. OF CHANGE

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
APPLICATION FOR CHANGE

REPORT OF EXAMINATION  
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE January 26, 1960	APPLICATION NUMBER 5476	PERMIT NUMBER 5187	CERTIFICATE NUMBER 3744-A
-----------------------------------	----------------------------	-----------------------	------------------------------

NAME  
TOWN OF MILLWOOD

ADDRESS (STREET)  
E. 9103 Frederick

(CITY)  
Spokane

(STATE)  
Washington

(ZIP CODE)  
99206

PUBLIC WATERS TO BE APPROPRIATED.

SOURCE  
Two (2) wells (an existing well and an additional well under this change)

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND

MAXIMUM GALLONS PER MINUTE  
600

MAXIMUM ACRE-FEET PER YEAR  
960

QUANTITY, TYPE OF USE, PERIOD OF USE  
600 gallons per minute, 960 acre feet per year, continuously, for municipal supply.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL

#1) Lot 8, Block 3, Hedman's Addition to the Town of Millwood in Sec. 7;

#2) (Additional Point of Withdrawal) 100 feet south and 500 feet east from the NW corner

of Sec. 8, within the N<sup>2</sup>W<sup>2</sup> NW<sup>2</sup> 1/4.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) BOTH WITHIN	SECTION 7 & 8	TOWNSHIP N. 25	RANGE, E. OR W. & W.M. 44 E.	W.R.L.A. 57	COUNTY Spokane
--	------------------	-------------------	---------------------------------	----------------	-------------------

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
-----	-------	------------------------------------

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Town of Millwood, Spokane County, Washington.

DESCRIPTION OF PROPOSED WORKS

Additional drilled well, pump, transmission mainline.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE: Started	COMPLETE PROJECT BY THIS DATE: Completed.	WATER PUT TO FULL USE BY THIS DATE: April 1, 1984
--	--	--

REPORT

BACKGROUND

An application for change to add an additional point of withdrawal was submitted by the Town of Millwood to the Department of Ecology on January 14, 1981. The application was accepted and processed. The proposed additional point of withdrawal is to be located in the N<sub>2</sub>N<sub>2</sub>W<sub>2</sub>W<sub>2</sub> of Sec. 8, T. 25 N., R. 44 E.W.M.

A notice of application was duly published in accordance with RCW 90.03.280; no protests or objections were received.

This application for change is categorically exempt from the provisions of the State Environmental Policy Act (SEPA) of 1971, Chapter 43.21C RCW.

INVESTIGATION

A field examination was conducted by this writer on January 12, 1982 with Dave South. Ground Water Certificate No. 2045-A, which is applicable to the existing well is also being processed for the same change. The reports will issue simultaneously.

Water Right Certificate No. 3744-A is the authority for 600 gallons per minute, 960 acre feet per year for municipal supply from a well.

The existing well (Hedman) is contaminated and as a consequence, the Town requests an additional point of withdrawal. They do not want to abandon the existing well. However, the Abbreviated Town of Millwood Water System Plan, dated April, 1982, by Esvelt Environmental Engineering, states an intent to abandon the Hedman well for municipal water, do to contamination. The report further states that the well may be used as an irrigation well for the West Valley School District, which is not within the authorized place of use under this certificate.

In order for the Town of Millwood to provide water from this well outside the corporate town limits, a change in the legal place of use is required. Therefore, an application for change or a new application for a permit will be required when the town intends to provide water to the school.

The proposed well has been constructed at the location requested. It is 196 feet in depth by 18 inches in diameter. Casing is installed to 175 feet with a screen installed from 175 to 196 feet. The well penetrates the Spokane-Rathdrum Aquifer, which consists of unconsolidated sand and gravel.

The static water level was measured at 51.85 feet.

CONCLUSIONS AND RECOMMENDATIONS

The proposed additional point of withdrawal is in the same aquifer, will not enlarge the water right and will not be injurious or detrimental to existing rights.

It is the conclusion and recommendation of this examiner that an additional point of withdrawal be authorized under Ground Water Certificate No. 3744-A, subject to the following provisions:

"A proof of appropriation examination of your project will be made prior to the issuance of a Certificate of Change. If the municipal use of the original well is discontinued, the Certificate of Change shall authorize the substitute well only."

"Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An airline and gage may be installed in addition to the access port."

"All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells)."

"A well log of the completed well shall be submitted by the driller to the Department of Ecology within thirty (30) days of completion of this well. This well log shall be complete and all information concerning the static water level in the completed well in addition to any pump test data shall be submitted as it is obtained." (Well log is on file with the department).

Signed at Spokane, Washington  
this 3rd day of December, 1982

/s/ Rynear R. Huffman, Jr.  
RYNEAR R. HUFFMAN, JR.  
Resource Management Division  
Department of Ecology

STATE OF WASHINGTON  
DEPARTMENT OF CONSERVATION  
AND DEVELOPMENT

WELL LOG

No. Appl. #2404

Date April 26, 1952

Cert. #1813-A

Record by Clyde W. Reeder Co., Inc.

Source Driller's Record

Location: State of WASHINGTON

County Spokane

Area

Map

NW 1/4 NW 1/4 sec. 8 T. 25 N., R. 44 E.

DIAGRAM OF SECTION

Drilling Co. Clyde W. Reeder Co., Inc.

Address 508 American Legion Bldg., Spokane, Wn.

Method of Drilling drilled Date Apr. 26 1952

Owner Town of Millwood

Address Millwood, Washington

Land surface, datum ft. above below

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
-------------	----------	------------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Gravel & sand	40	40
	Gravel & boulders (in water)	72	112
Pump Test:			
	Dim: 112' x 16"		
	S&L: 40'		
	Dd: 1'		
	Yield: 1100 g.p.m.		
	Casing: 16" diameter from 0 to 56'		
	16" perforated casing from 56' to 111'		
	Perf: 5 per ft. in row, 6 rows in casing		
	5/16" wide, 1/4" long, spaced on 1/4" centers		
	from 56' to 111'		

Turn up

Sheet of sheets

"OLD PARK" WELL

STATE OF WASHINGTON  
DEPARTMENT OF CONSERVATION  
AND DEVELOPMENT

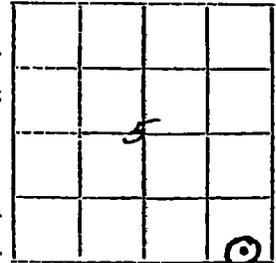
No. A.5174; C.4139-

WELL LOG

Date 3-6, 1962

Record by well driller

Source driller's record



Location: State of WASHINGTON

County Spokane

Area

Map

1/4 sec. 5 T. 25 N., R. 44 W.

Diagram of Section

Drilling Co. Spokane Drilling Co.

Address E.2504 Pacific Ave., Spokane

Method of Drilling Date 6-1959, 19

Owner Town of Millwod

Address E.9103 Frederick, Millwood

Land surface, datum ft above  
below

"BUTLER" WELL

CORRE- LATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
------------------	----------	---------------------	-----------------

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Gravel, sand, clay	50	50
	Gravel, sand & boulders	80	130
	PUMP TEST:		
	Dim. 16"x130'		
	SWL: 70 ft. (6-59)		
	DD: 2 ft.		
	Yield: 850 g.p.m.		
	Water Temp. 53° F.		
	Full recovery 2 min.		
	CASING:		
	16" diam. steel from 0 to 130 ft.		
	PERFORATIONS:		
	6 rows 5/16"x4" on 4" centers		
	from 80 to 130 ft.		

Turn up

Sheet \_\_\_\_\_ of \_\_\_\_\_ sheets

