

WELL CONSTRUCTION AND TEST REPORT  
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER  
1313 Sherman St., Rm 818, Denver, CO 80203

For Office Use only

RECEIVED

JUL 10 1998

WATER RESOURCES  
STATE ENGINEER  
COLO.

MH-30645, Well No. W-3

1. WELL PERMIT NUMBER 210286

2. OWNER NAME(S) PUBLIC SERVICE COMPANY OF COLORADO  
Mailing Address 1225 SEVENTEENTH STREET, STE 900  
City, St. Zip DENVER, COLORADO 80202  
Phone (303) 294-8566

3. WELL LOCATION AS DRILLED: NE 1/4 SE 1/4, Sec. 20 Twp. 21 S, Range 64 W  
DISTANCES FROM SEC. LINES:  
3,940 ft. from N Sec. line. and 830 ft. from E Sec. line. OR  
(north or south) (east or west)  
SUBDIVISION: \_\_\_\_\_ LOT - BLOCK - FILING(UNIT) -  
STREET ADDRESS AT WELL LOCATION: COMANCHE STATION, 2005 LIME RD, PUEBLO, CO 81006

4. GROUND SURFACE ELEVATION 4807 ft. DRILLING METHOD AUGER  
DATE COMPLETED MAY 20, 1997 TOTAL DEPTH 30 ft. DEPTH COMPLETED 30 ft.

5. GEOLOGIC LOG:

Depth	Description of Material (Type, Size, Color, Water Location)
0'-2'	COAL DUST, MIXED WITH SILT, LOOSE, DRY, BROWN.
2'-29.5'	CLAY, STIFF, MORE SANDY AND GRAVELLY WITH DEPTH, DRY TO MOIST, BROWN, RUST.
29.5'-30'	CLAYSTONE, WEATHERED, STIFF, BLOCKY, MOIST, OLIVE, RED.

NOTES: 1) BOTTOM 1 FOOT OF HOLE WAS  
BACKFILLED TO SET BOTTOM OF  
CASING AT 29 FEET.  
2) GROUND WATER WAS MEASURED AT  
13 FEET AT TIME HOLE WAS  
DRILLED.  
3) GDI DRILLING COMPANY WAS  
CONTRACTED TO DRILL HOLE.

(W-3)

REMARKS: THIS IS A MONITORING WELL FITTED  
WITH A LIMITED ACCESS MONITORING WELL  
PROTECTOR TYPE STEEL RISER (GROUTED).

6. HOLE DIAM. (in.) From (ft) To (ft)

From (ft)	To (ft)
0	30

7. PLAIN CASING

OD (in)	Kind	Wall Size	From(ft)	To(ft)
2	PVC		0	14
CAPPED AT TOP WITH A LOCKING J-PLUG.				
PERF. CASING: Screen Slot Size:			20	
2	PVC		14	29

8. FILTER PACK:  
Material SILICA SAND  
Size 10/20  
Interval 13' - 29'

9. PACKER PLACEMENT:  
Type \_\_\_\_\_  
Depth \_\_\_\_\_

10. GROUTING RECORD:

Material	Amount	Density	Interval	Placement
CONCRETE		150PCF	0'-3.5'	POURED

11. DISINFECTION: Type \_\_\_\_\_ Amt. Used \_\_\_\_\_

12. WELL TEST DATA:  Check box if Test Data is submitted on Form No. GWS 39 Supplemental Well Test.  
TESTING METHOD \_\_\_\_\_  
Static Level \_\_\_\_\_ ft. Date/Time measured \_\_\_\_\_, Production Rate \_\_\_\_\_ gpm.  
Pumping level \_\_\_\_\_ ft. Date/Time measured \_\_\_\_\_, Test length (hrs.) \_\_\_\_\_  
Remarks THIS IS A MONITORING WELL SO THIS ITEM NOT APPLICABLE.

13. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR CTL/THOMPSON, INC. Phone (303) 825-0777 Lic. No. \_\_\_\_\_  
Mailing Address 1971 WEST 12TH AVENUE, DENVER, COLORADO 80204

Name/Title (Please type or print) FRANK J. HOLLIDAY, PE / PRINCIPAL Signature [Signature] Date JUNE 19, 1998

The report must be typed or printed in **BLACK INK**. All changes on the form must be initialed and dated. Attach additional sheets if more space is required. Each additional sheet must be identified at the top by the well owner's name, the permit number, form name/number and a sequential page number. Report depths in feet below ground surface.

This form may be reproduced by photocopy methods, or by computer generation with prior approval by the State Engineer. Photocopy reproductions must retain margins and print quality of the original form.

The original form must be submitted to the State Engineer's Office within 60 days after completing the well or 7 days after the permit expiration date, whichever is earlier.

A copy of the form must be provided to the well owner.

1. Complete the Well Permit Number in full.
2. Fill in Name and Mailing Address of Well Owner where correspondence should be sent.
3. Complete the blocks for the **actual** location of the well where drilled. If the owner has more than one well serving this property, provide the identification (**Owner's Designation**) for this well. **DO NOT USE THE OWNER SUPPLIED LOCATION** unless a survey has been provided. For wells located in subdivisions the lot, block and subdivision information must also be provided.
4. Report the ground surface elevation in feet above sea level if available. This value may be obtained from a topographic map. Describe the drilling method used to construct the well and the date completed. Indicate the total depth drilled and the actual completed depth of the well.
5. Fully describe the materials encountered in drilling. Do not use formation names unless they are in conjunction with a description of materials.  
Examples of descriptive terms include:  
**Grain size**—Boulders, gravel, sand, silt, clay.  
**Hardness**—Loose, soft, tight, hard, very hard.  
**Color**—All materials. Most critical in sedimentary rock.  
Depth when water is encountered (if it can be determined).
6. Provide the diameters of the drilled bore hole.
7. The outside diameter, kind, wall thickness and interval of casing lengths must be indicated.
8. Indicate the type and size of filter (gravel) pack and the interval where placed.
9. Indicate the type and setting depth for any packers installed.
10. The density of the grout slurry must be reported and may be indicated as pounds per gallon, gallons of water per sack, total gallons of water and number of sacks used, etc. Specify the grout placement method, i.e. tremie pipe or positive displacement. The percentage of additives mixed with the grout should be reported under remarks.
11. Record the type and the amount of disinfection used, how placed and the length of time left in the hole.
12. Report well test data as required by Rule 10.7. Spaces are provided to report all measurements made during the test. The report should show that the test complied with the provisions of the rules. If a test was not performed explain when it will be done. If available, report clock time when measurements were taken.
13. Fill in **Company Name and Address of Contractor** who constructed the well. The report must be signed by the licensed contractor responsible for the construction of the well.

OFFICE OF THE STATE ENGINEER  
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

LIC

WELL PERMIT NUMBER	<b>210286</b>
DIV. 2	CNTY. 51 WD 15 DES. BASIN MD

APPLICANT

Lot: Block: Filing: Subdiv:

PUBLIC SERVICE CO OF COLORADO  
1225 17TH ST STE 900  
DENVER CO 80202-

(303)294-8566

APPROVED WELL LOCATION  
PUEBLO COUNTY

NW 1/4 SE 1/4 Section 20  
Twp 21 S RANGE 64 W 6th P.M.

DISTANCES FROM SECTION LINES

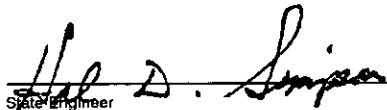
3940 Ft. from North Section Line  
830 Ft. from East Section Line

**PERMIT TO USE AN EXISTING WELL**

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT  
CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(i) for uses as described in CRS 37-92-602(1)(f). **Use of this well is limited to monitoring water levels and/or water quality sampling.**
- 4) Approved for the use of an existing well acknowledged for construction under monitoring hole notice **MH-30645, known as W-3.**
- 5) This well must be equipped with a locking cap or seal to prevent well contamination or possible hazards as an open well. The well must be kept locked at all times except during sampling or measuring.
- 6) Records of water level measurements and water quality analyses shall be maintained by the well owner and submitted to the Division of Water Resources upon request.
- 7) Upon conclusion of the monitoring program the well owner shall plug and seal this well in accordance with the Water Well Construction Rules. A Well Abandonment Report must be completed and submitted to the Division of Water Resources within 60 days of plugging and sealing.
- 8) The owner shall mark the well in a conspicuous place with well permit number and name of aquifer as appropriate, and shall take necessary means and precautions to preserve these markings.
- 9) This well must have been constructed by or under the supervision of a licensed well driller or other authorized individual according to the Water Well Construction Rules.
- 10) This well shall be located not more than 200 feet from the location specified on this permit.

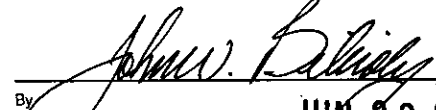
APPROVED  
KWM

  
State Engineer

Receipt No. 0430074C

DATE ISSUED

JUN 09 1998

  
By

EXPIRATION DATE

JUN 09 2000

COLORADO DIVISION OF WATER RESOURCES  
 DEPARTMENT OF NATURAL RESOURCES  
 1313 SHERMAN ST., RM. 818, DENVER CO 80203  
 phone - info: (303) 866-3587 main: (303) 866-3581

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MAY 11 1998


3X25

**MONITORING/OBSERVATION**

Water Well Permit Application  
THE PROFESSIONAL STATE ENGINEER OF COLO.

Review instructions prior to completing form.

Must be completed in black ink or typed

<b>1. APPLICANT INFORMATION</b>				<b>6. USE OF WELL</b>			
Name of applicant Public Service Company of Colorado				<input checked="" type="checkbox"/> GROUND WATER SAMPLING (quality) <input type="checkbox"/> MONITOR WATER LEVELS <input type="checkbox"/> OTHER:			
Mailing Address 1225 17th Street, Suite 900				<b>7. WELL DATA</b>			
City Denver		State CO		Zip code 80202		Total depth 35 feet	
Telephone number (include area code) (303) 294-8566				<b>8. CONSULTANT INFORMATION (optional)</b>			
<b>2. TYPE OF APPLICATION (check applicable box(es))</b>				Name			
<input checked="" type="checkbox"/> Use existing well <input type="checkbox"/> Construct new well <input type="checkbox"/> Other:				Address			
<input type="checkbox"/> Replacement for -- permit no. _____				Telephone number (include area code)			
<b>3. REFER TO (if applicable):</b>				<b>9. PROPOSED WELL DRILLER (optional)</b>			
Monitoring hole acknowledgment # MH- 30645		Well name or # W-3		Company name		License number	
<b>4. LOCATION OF WELL</b>				<b>10. SIGNATURE of applicant(s) or authorized agent</b>			
County Pueblo		Quarter/quarter NW ¼		Quarter SE ¼		The making of false statements herein constitutes perjury in the second degree, which is punishable as a class 1 misdemeanor pursuant to C.R.S. 24-4-104(13)(a). I have read the statements herein, know the contents thereof, and state that they are true to my knowledge.	
Section 20	Township N or S 21 <input type="checkbox"/> N <input checked="" type="checkbox"/> S	Range E or W 64 <input type="checkbox"/> E <input checked="" type="checkbox"/> W	Principal Meridian 6	Must be original signature 			
Distance of well from section lines 3,940 ft. from <input checked="" type="checkbox"/> N <input type="checkbox"/> S 830 ft. from <input checked="" type="checkbox"/> E <input type="checkbox"/> W				Print name legibly Charles H. Fuller			
Well location address, if different from applicant address (if applicable) Comanche Station 2005 Lime Road, Pueblo, CO 81006				Title General Manager, Commodity Services			
For replacement wells only - distance and direction from old well to new well feet direction				Date 4-27-98			
<b>5. OWNERSHIP INFORMATION</b>				See the reverse side of this form for instructions, fee, and advisory information			
WELL OWNER NAME (if different than applicant)				<b>OPTIONAL INFORMATION</b>			
Address				USGS map name		DWR map no. 79 I	Surface elev.
City		State		Zip Code		Office Use Only	
Telephone no. (include area code)				DIV <u>2</u>			
PROPERTY OWNER NAME (if different than above)				CO <u>51</u>			
Address				WD <u>15</u>			
City		State		Zip Code		BA _____	
Telephone no. (include area code)				CHECKS TRW430074 051198 180.00			
				DIV OF WATER RESOURCES USE MD			

## MONITORING & OBSERVATION WELL PERMIT APPLICATION INSTRUCTIONS

ADVISORY INFORMATION: MONITORING WELLS ARE TO BE USED FOR MONITORING OF WATER LEVELS AND WATER QUALITY SAMPLING PURPOSES ONLY – AT ANY TIME THAT AN AUTHORIZED INDIVIDUAL IS NOT PRESENT SUPERVISING MONITORING & SAMPLING OF THE WELL, THE WELL IS TO BE SECURELY CAPPED & LOCKED. For RECOVERY wells use General Purpose form GWS-45 (12/95), do not use this form. For well construction criteria refer to the Colorado Water Well Construction Rules, 2CCR 402-2. A copy of the Rules may be obtained from any Division of Water Resources Office for a fee of \$3.

**FEES** A \$60 non-refundable filing fee is required for each application. The fee for replacement wells is \$20. Checks should be payable to the COLORADO DIVISION OF WATER RESOURCES. An application must be submitted for each well.

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ALL APPLICATIONS MUST BE COMPLETED IN BLACK INK OR TYPED

**ITEM 1** APPLICANT INFORMATION - This is the applicant's name and the address where all correspondence will be sent.

**ITEM 2** TYPE OF APPLICATION - Check applicable box(es).

**ITEM 3** REFER TO (if applicable) - Provide MH number assigned by Division of Water Resources in response to notice of intent to construct a monitoring and observation well. Complete WELL NAME if the structure has a name or identifying number.

**ITEM 4** LOCATION OF WELL - The location of the well must be correctly and accurately described. The county,  $\frac{1}{4}$ - $\frac{1}{4}$  (quarter/quarter), section, township, range, principal meridian, and distance from section lines must be provided. If the well location address is different than ITEM 1, provide the well location address, or state "same as 1." If this is for the replacement of an existing well, provide the information requested in the last blank of item 4.

**ITEM 5** OWNERSHIP INFORMATION - If the owner is not the applicant, complete this information.

**ITEM 6** USE OF WELL - Check applicable entry for the intended use(s).

**ITEM 7** WELL DATA - The actual or anticipated total depth must be provided. Provide the name of the aquifer in which the well will be completed.

**ITEM 8** CONSULTANT INFORMATION (optional) - Provide company name, address, phone, & contact person.

**ITEM 9** PROPOSED WELL DRILLER (optional) - Provide name & license number. The well must be constructed in compliance with the Well Construction Rules, 2CCR 402-2, unless a variance has been approved allowing an alternative construction design.

**ITEM 10** SIGNATURE - An ORIGINAL signature of either the applicant or consultant must be on each application. Please print the name and title of the person signing the application, and include the date.

**OPTIONAL INFORMATION** If known, you may complete this information. This information is helpful in the evaluation of the application, and may be completed by the applicant, consultant, or staff evaluator.

IF YOU HAVE ANY QUESTIONS regarding any item on the application form, please call the Division of Water Resources Ground Water Information Desk (303-866-3587), or the nearest Division of Water Resources Field Office located in Greeley (970-352-8712), Pueblo (719-542-3368), Alamosa (719-589-6683), Montrose (970-249-6622), Glenwood Springs (970-945-5665), Steamboat Springs (970-879-0272), or Durango (970-247-1845).



JUL 10 1998

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COMPANY OF COLORADO™****SOUTHWESTERN  
PUBLIC SERVICE COMPANY™****CHEYENNE LIGHT  
FUEL & POWER™**...RESOURCES  
STATE ENGINEER  
COLO.Environmental Services Department  
PO Box 840  
Denver, Colorado 80202-0840  
Fax 303.571.7880

July 8, 1998

John Bilisoly  
Phy. Sci. Researcher/Sci. Intern  
Division of Water Resources  
Department of Natural Resources  
Colorado State Engineer  
1313 Sherman St., Room 818  
Denver, CO 80203RE: Public Service Company of Colorado – Comanche Station – Ground Water  
Monitoring Well Permit Applications

Dear John:

In May 1998, Public Service Company of Colorado (PSC) submitted to the Division of Water Resources three monitoring well permit applications for monitoring wells constructed at Comanche Station. Subsequently, the Division of Water Resources indicated that additional information was required for the permits to be issued.

On June 8, 1998, PSC faxed well construction information for the three wells to the Division of Water Resources. This information allowed the Division of Water Resources to issue the permits for the wells with the provision that PSC would submit, to the Division of Water Resources, information concerning the well construction for each well using form GWS-31 and request a variance for the wells with a depth of less than 20 feet.

Attached for each of these three ground water monitoring wells is a copy of the original monitoring well permit application; the well construction summary which was submitted on June 8, 1998; the permit issued, by the division of Water Resources, for each well, and the well construction information for each well on form GWS-31.

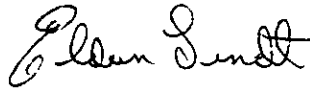
The information from the GWS-31 forms indicates that wells W-1 and W-2 require a variance from the Division of Water Resources due to a depth of less than thirty feet. A copy of the variance request has been attached.

JUL 10 1998

RESOURCES  
STATE ENGINEER  
COLO.

If you have any questions concerning the attached information or require additional information to complete the permit application for these wells at PSC's Comanche Station, please call me at (303) 571-7440.

Sincerely,



Eldon Lindt  
Team Lead, Air & Water

**Attachments:**

(for wells W-1, W-2, and W-3)  
Monitoring Well Permit Application  
Construction Summary Information Submitted On June 8, 1998  
Well Permits From The Division of Water Resources  
GWS-31 Construction Information Forms

Monitoring Well Variance Request

Cc: Jim Weller - PSC  
Olon Plunk - NCS

Mark Andorka - PSC  
Dean Metcalf - NCS



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WATER RESOURCES  
STATE ENGINEER  
COLO.

**Comanche Station**

**Monitoring Well W-3 Information**

**Monitoring Water Well Permit Application  
Construction Summary Information (Submitted June 8, 1998)  
Permits Issued By the Division of Water Resources  
GWS-31 Construction Information Form**



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**WATER RESOURCES  
STATE ENGINEER  
COLO.**

Environmental Services Department  
PO Box 840  
Denver, Colorado 80202-0840  
Fax 303.571.7880

July 8, 1998

Mr. Dave McElhaney  
Division of Water Resources  
Department of Natural Resources  
Colorado State Engineer  
1313 Sherman St., Room 818  
Denver, CO 80203

RE: Public Service Company of Colorado – Comanche Station – Ground Water Monitoring Well  
Permit Applications

Dear Mr. McElhaney:

In May 1997, Public Service Company of Colorado (PSC) contracted the construction of three ground water monitoring wells at the Comanche Power Station in Pueblo, CO. In May 1998, ground water monitoring well permit applications were submitted, to the Division of Water Resources, for these wells.

In June 1998, the Division of Water Resources indicated that two of the monitoring wells required variances due to the well depths. Information on wells identified as W-1 and W-2 are provided as attachments.

With respect to the ground water construction requirements in 2 CCR-402-2 Sections 10.4.3 and 10.5.2.1, PSC is requesting a variance for wells W-1 and W-2 constructed at Comanche Station in May 1997. These wells were constructed to monitor shallow ground water quality and construction of the wells to comply with Sections 10.4.3 and 10.5.2.1 would have been impractical and inhibited the intended use of the well.

If you have any questions concerning the construction of the wells at Comanche Station or PSC's variance request, please call me at (303) 571-7440.

Sincerely,

Eldon Lindt  
Team Lead, Air & Water

Attachments: (for wells W-1 and W-2)  
Monitoring Well Permit Application  
Construction Summary Information Submitted On June 8, 1998  
Well Permits From The Division of Water Resources  
GWS-31 Construction Information Forms

Cc: Jim Weller – PSC  
Olon Plunk - NCS

Mark Andorka – PSC  
Dean Metcalf – NCS

# STATE OF COLORADO

BOARD OF EXAMINERS OF WATER WELL CONSTRUCTION AND PUMP INSTALLATION CONTRACTORS  
Division of Water Resources  
Department of Natural Resources

1313 Sherman Street, Room 818  
Denver, Colorado 80203  
Phone (303) 866-3581  
FAX (303) 866-3589

July 17, 1998



Roy Romer  
Governor

James S. Lochhead  
Executive Director, DNR

Hal D. Simpson  
Secretary

Mr. Eldon Lindt  
New Century Energies  
Environmental Services Department  
P.O. Box 840  
Denver, CO 80202-0840

**RE: Request for Variance, Monitoring Holes MH-30645, (W-1, W-2 and W-3) Public Service Company, Comanche Station, Sec. 20, T21S, R64W, 6<sup>th</sup> PM, Pueblo County**

Request No: 98-140A

Dear Mr. Lindt:

Thank you for the Request for Variance received July 10, 1998 regarding the subject monitoring holes. Your request has been reviewed for the Board of Examiners of Water Well Construction and Pump installation Contractors. The request is specifically for a variance from Rules 10.4.3 and 10.5.2.1.

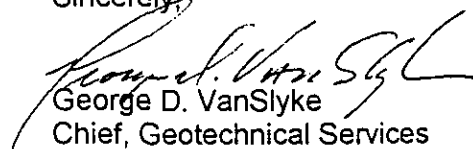
Pursuant to Rule 18 and the authority granted by the Board, the required variance to rules 10.4.3 and 10.5.2.1 is granted subject to the following conditions:

- 1) The well construction will be in accordance with the Water Well Construction Rules except those Rules for which a variance was granted.
- 2) The Monitoring holes are constructed in a similar manner to the diagrams provided.

Granting the request for variance to minimum water well construction standards does not relieve the owner of potential responsibility or liability in the event contamination of the water source results from such construction, nor does the grantor assume any responsibility or liability should contamination occur.

If you have any questions regarding this matter please contact this office.

Sincerely,

  
George D. VanSlyke  
Chief, Geotechnical Services

GDV/gla:s:\bordexam\variance98\98-140A.doc

cc: Well File MH-30645



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WATER RESOURCES  
STATE ENGINEER  
COLO

Environmental Services Department  
PO Box 840  
Denver, Colorado 80202-0840  
Fax 303.571.7880

December 1, 1999

John Bilisoly

Phy. Sci. Researcher/Sci. Intern  
Division of Water Resources  
Department of Natural Resources  
Colorado State Engineer  
1313 Sherman St., Room 818  
Denver, CO 80203

RE: Public Service Company of Colorado - Comanche Station  
Ground Water Monitoring Wells - Permit No. 210284  
Permit No. 210285  
Permit No. 210286

Dear John:

As discussed today this letter is provided to ensure that the Division of Water Resources' files are complete with respect to the permitting of the ground water monitoring wells at Comanche Station. The attached information includes the following:

- 1) A copy of a letter dated July 8, 1998, is provided as Attachment I. This letter provided a copy of Monitoring Well Permit Application (GWS-41), construction summary information, well permits from the Division of Water Resources, and the Construction Information Form (GWS-31 for each well. In addition, the letter included a copy of the variance request that was submitted to Mr. Dave McElhaney.
- 2) A copy of the variance issued by the Division of Water Resources, which was dated July 17, 1998, is provided as Attachment II.

After your review of the attached information, please let me know if any additional information is needed.

Review of the permits indicates that they have an expiration date of June 9, 2000. The wells will be in service after the expiration date. Based on our discussion this morning, if the Division's files are complete no renewal application or additional information will be required to be submitted for these permits. I will contact you to discuss whether additional information is required for continued authorization of these wells by the Division of Water Resources.

If you have any questions concerning the attached information or about the ground water monitoring wells at Comanche Station, please call me at 303-571-7440.

Sincerely,

Eldon Lindt  
Team Lead, Air and Water

Attachments

Cc: Jim Weller  
Olon Plunk

Mark Andorka  
Dean Metcalf

**ATTACHMENT 1**

---

**MONITORING WELL CONSTRUCTION DOCUMENTATION**

COLORADO DIVISION OF WATER RESOURCES  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80202

**RECEIVED**

AUG 20 1987

DIV OF WATER RESOURCES  
STATE ENGINEER  
COLORADO

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

- FOR:  A PERMIT TO USE GROUND WATER  
 A PERMIT TO CONSTRUCT A WELL  
 A PERMIT TO INSTALL A PUMP
- REPLACEMENT FOR NO. \_\_\_\_\_  
 OTHER \_\_\_\_\_  
 WATER COURT CASE NO. \_\_\_\_\_

**(1) APPLICANT** - mailing address

NAME Howard Noble & Public Service  
 STREET 5900 E. 39th Ave  
 CITY Denver, Colo 80207  
(State) (ZIP)  
 TELEPHONE NO. 329-1130

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 79236 A  
 Basin \_\_\_\_\_ Dist. \_\_\_\_\_

**(2) LOCATION OF PROPOSED WELL**

County ~~San Juan~~ Pueblo  
SE  $\frac{1}{4}$  of the SW  $\frac{1}{4}$ , Section 20  
 Twp. 21 S, Rng. 64 W, 6th P.M.  
(N.S) (E.W)

**CONDITIONS OF APPROVAL**

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

**(3) WATER USE AND WELL DATA**

Proposed maximum pumping rate (gpm) 0  
 Average annual amount of ground water to be appropriated (acre-feet): 0  
 Number of acres to be irrigated: 0  
 Proposed total depth (feet): 20  
 Aquifer ground water is to be obtained from:  
Alluvium  
 Owner's well designation MW-1

- 1) APPROVED PURSUANT TO C.R.S. 37-90-137(2) TO SATISFY THE PERMIT REQUIREMENTS OF C.R.S. 37-90-138(3). USE OF THIS WELL IS LIMITED TO MONITORING WATER LEVELS AND/OR WATER QUALITY SAMPLING.
- 2) THIS WELL MUST BE EQUIPPED WITH A LOCKING CAP OR SEAL TO PREVENT WELL CONTAMINATION OR POSSIBLE HAZARDS AS AN OPEN WELL. THE WELL MUST BE KEPT LOCKED AT ALL TIMES EXCEPT DURING SAMPLING OR MEASURING.
- 3) RECORDS OF WATER LEVEL MEASUREMENTS AND WATER QUALITY ANALYSES SHALL BE MAINTAINED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES UPON REQUEST.
- 4) UPON CONCLUSION OF THE MONITORING PROGRAM, THE APPLICANT SHALL PLUG AND ABANDON THIS WELL IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR WATER WELL CONSTRUCTION AND PUMP INSTALLATION CONTRACTORS.
- 5) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER AND NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS. 9/14/87

**GROUND WATER TO BE USED FOR:**

HOUSEHOLD USE ONLY - no irrigation (0)  
 DOMESTIC (1)  INDUSTRIAL (5)  
 LIVESTOCK (2)  IRRIGATION (6)  
 COMMERCIAL (4)  MUNICIPAL (8)

OTHER (9) ground water monitoring  
 DETAIL THE USE ON BACK IN (11)

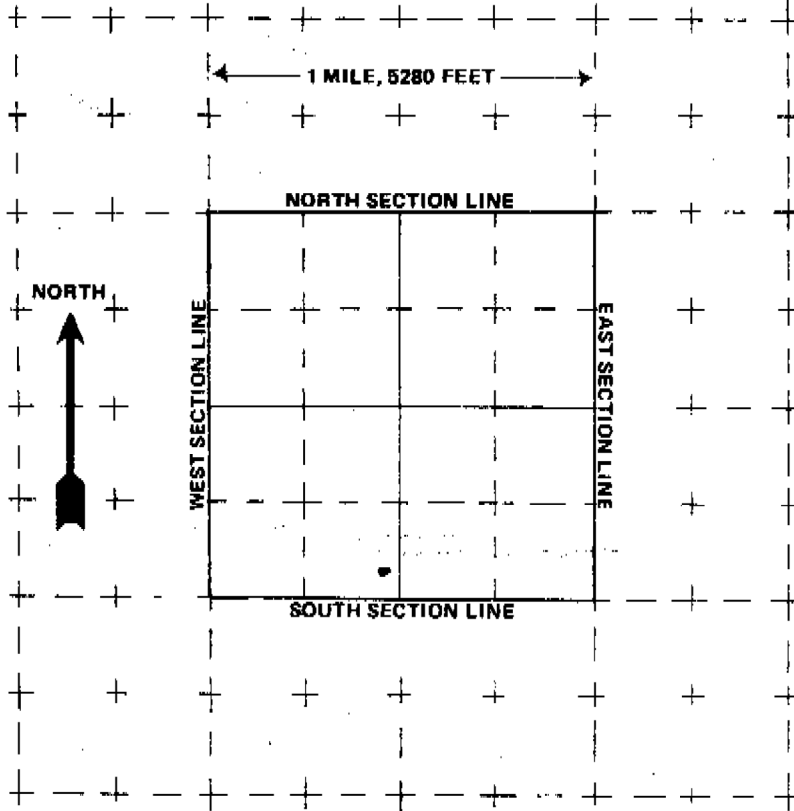
**APPLICATION APPROVED**

PERMIT NUMBER 032282-M  
 DATE ISSUED AUG 25 1987  
 EXPIRATION DATE AUG 25 1988  
 \_\_\_\_\_  
(STATE ENGINEER)  
 BY Nick Vander Horst  
 I.D. 2-15 COUNTY 31

**(4) DRILLER**

Name Hier Drilling Co.  
 Street P.O. Box 250  
 City Castle Rock, Colo 80104  
(State) (ZIP)  
 Telephone No. 688-3012 Lic. No. 8

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons:  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

360 ft. from South sec. line  
(north or south)

2485 ft. from West sec. line  
(east or west)

LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ FILING # \_\_\_\_\_

SUBDIVISION none

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: Public Service

No. of acres 309 Will this be the only well on this tract? no

(8) **PROPOSED CASING PROGRAM**

Plain Casing  
6 in. from +2 ft. to 2 ft.  
4 in. from +2 ft. to 15 ft.  
Perforated casing  
4 in. from 15 ft. to 20 ft.  
\_\_\_\_\_ in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

n/a  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): Public Service No. of acres: \_\_\_\_\_

Legal description: (see front) Comanche Steam Plant/Pueblo

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Ground water level and analysis

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
<u>unknown</u>		

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**

[Signature]  
SIGNATURE OF APPLICANT(S)



WAEAD

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818  
Denver, Colorado 80203

RECEIVED

OCT 23 1987

THIS FORM MUST BE SUBMITTED  
WITHIN 60 DAYS OF COMPLETION  
OF THE WORK DESCRIBED HERE-  
ON. TYPE OR PRINT IN BLACK  
INK.

WELL COMPLETION AND PUMP INSTALLATION REPORT

WATER RESOURCES  
STATE ENGINEER  
COLO.

PERMIT NUMBER [REDACTED]

WELL OWNER Public Service

SE 1/4 of the SW 1/4 of Sec. 20

ADDRESS 5900 E. 39th Ave. Denver, CO 80207

T. 21 S. R. 64 W. 6 P.M.

DATE COMPLETED September 4, 1987

HOLE DIAMETER

8 in. from 0 to 11 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

DRILLING METHOD Air rotary

CASING RECORD: Plain Casing

Size 6 5/8 & kind Steel from +2.5 to 3.5 ft.

Size 4 1/2 & kind PVC from +2 to 4 ft.

Size 4 1/2 & kind PVC from 9 to 11 ft.

Perforated Casing

Size 4 1/2 & kind PVC from 4 to 9 ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

GROUTING RECORD

Material Cement

Intervals 3.5' up to surface

Placement Method Halliburton

GRAVEL PACK: Size 9-12

Interval 11' up to 4'

TEST DATA

Date Tested \_\_\_\_\_, 19\_\_

Static Water Level Prior to Test \_\_\_\_\_ ft.

Type of Test Pump \_\_\_\_\_

Length of Test \_\_\_\_\_

Sustained Yield (Metered) \_\_\_\_\_

Final Pumping Water Level \_\_\_\_\_

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	<del>5.8</del>	Brown clay	
5	7	Yellow sandy clay	
7	11	Brown clay & gray shale	
11		Bottom	
		Volclay seal @ 4' up to 3.5'	
		TOTAL DEPTH <u>11'</u>	

Use additional pages necessary to complete log.

# PUMP INSTALLATION REPORT

Pump Make \_\_\_\_\_

Type \_\_\_\_\_

Powered by \_\_\_\_\_ HP \_\_\_\_\_

Pump Serial No. \_\_\_\_\_

Motor Serial No. \_\_\_\_\_

Date Installed \_\_\_\_\_

Pump Intake Depth \_\_\_\_\_

Remarks \_\_\_\_\_

## WELL TEST DATA WITH PERMANENT PUMP

Date Tested \_\_\_\_\_

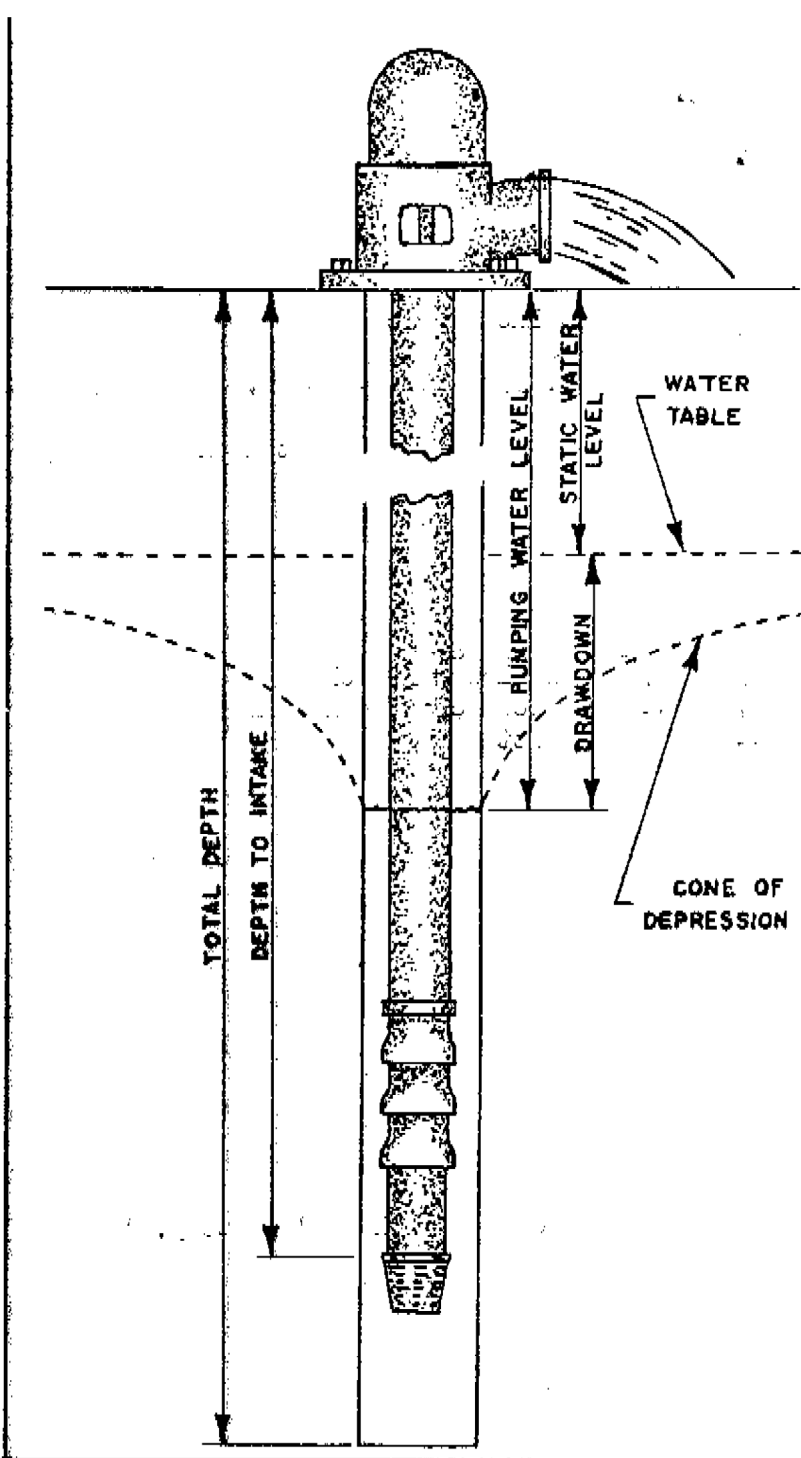
Static Water Level Prior to Test \_\_\_\_\_

Length of Test \_\_\_\_\_ Hours

Sustained yield (Metered) \_\_\_\_\_ GPM

Pumping Water Level \_\_\_\_\_

Remarks \_\_\_\_\_



## CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature George A. Wiers License No. 735

State of Colorado, County of Douglas SS

Subscribed and sworn to before me this September 24 day of 19 87

My Commission expires: February 23, 1990

Notary Public Pat J. Mui



FORM TO BE MADE OUT IN QUADRUPPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

RECEIVED

AUG 20 1987

COLORADO DIVISION OF WATER RESOURCES  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

PERMIT APPLICATION FORM

Application must be complete applicable type printed in INK. No overstrikes or erasures unless initialed.

WR-100  
DIVISION OF WATER RESOURCES  
STATE ENGINEER  
COLORADO

- ( ) A PERMIT TO USE GROUND WATER
- A PERMIT TO CONSTRUCT A WELL
- FOR: ( ) A PERMIT TO INSTALL A PUMP
- ( ) REPLACEMENT FOR NO. \_\_\_\_\_
- ( ) OTHER \_\_\_\_\_
- WATER COURT CASE NO. \_\_\_\_\_

(1) APPLICANT - mailing address

NAME Howard Noble % Public Service

STREET 5900 E. 39th Ave.

CITY Denver, Colo. 80207  
(State) (Zip)

TELEPHONE NO. 329-1130

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 79236 B

Basin \_\_\_\_\_ Dist. \_\_\_\_\_

(2) LOCATION OF PROPOSED WELL

County SW SE Pueblo

SW 1/4 of the SE 1/4, Section 20

Twp. 21 S, Rng. 64 W, 6th P.M.  
(N.S) (E.W)

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 0

Average annual amount of ground water to be appropriated (acre-feet): 0

Number of acres to be irrigated: 0

Proposed total depth (feet): 20

Aquifer ground water is to be obtained from:  
Alluvium

Owner's well designation MW-2

GROUND WATER TO BE USED FOR:

- ( ) HOUSEHOLD USE ONLY - no irrigation (0)
  - ( ) DOMESTIC (1)
  - ( ) LIVESTOCK (2)
  - ( ) COMMERCIAL (4)
  - ( ) INDUSTRIAL (5)
  - ( ) IRRIGATION (6)
  - ( ) MUNICIPAL (8)
  - OTHER (9) ground water monitoring
- DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name Hier Drilling Co.

Street P.O. Box 250

City Castle Rock, Colo. 80104  
(State) (Zip)

Telephone No. 688-3012 Lic. No. 8

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

- 1) APPROVED PURSUANT TO C.R.S. 37-90-137(2) TO SATISFY THE PERMIT REQUIREMENTS OF C.R.S. 37-90-138(3). USE OF THIS WELL IS LIMITED TO MONITORING WATER LEVELS AND/OR WATER QUALITY SAMPLING.
- 2) THIS WELL MUST BE EQUIPPED WITH A LOCKING CAP OR SEAL TO PREVENT WELL CONTAMINATION OR POSSIBLE HAZARDS AS AN OPEN WELL. THE WELL MUST BE KEPT LOCKED AT ALL TIMES EXCEPT DURING SAMPLING OR MEASURING.
- 3) RECORDS OF WATER LEVEL MEASUREMENTS AND WATER QUALITY ANALYSES SHALL BE MAINTAINED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES UPON REQUEST.
- 4) UPON CONCLUSION OF THE MONITORING PROGRAM, THE APPLICANT SHALL PLUG AND ABANDON THIS WELL IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR WATER WELL CONSTRUCTION AND PUMP INSTALLATION CONTRACTORS.
- 5) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER AND NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS. 4/24/97

APPLICATION APPROVED

PERMIT NUMBER 032283-M

DATE ISSUED AUG 25 1987

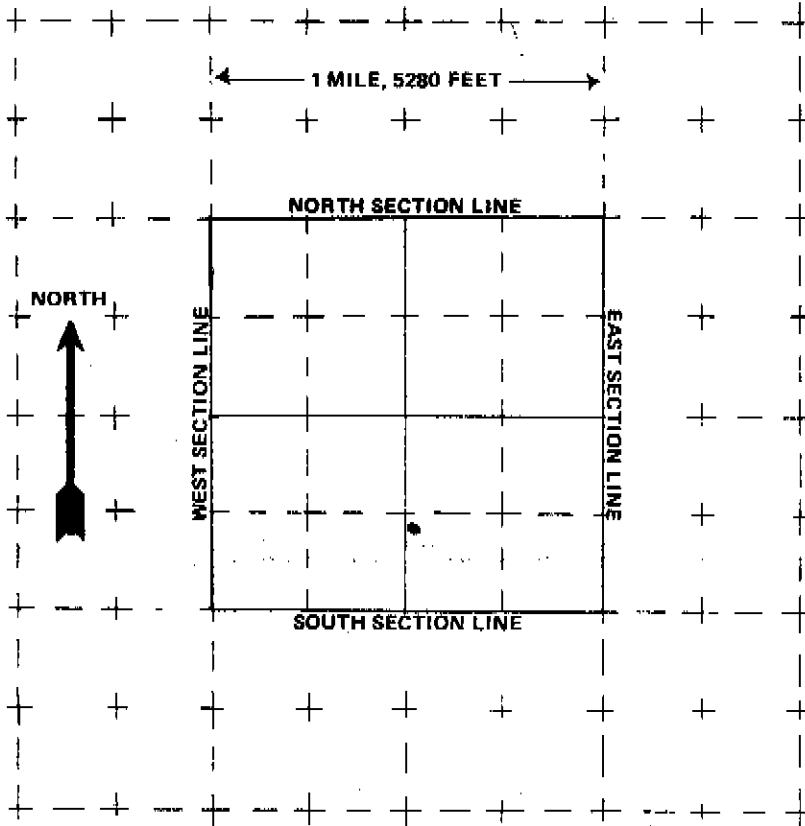
EXPIRATION DATE AUG 25 1988

John A. Danilson  
(STATE ENGINEER)

BY Keith Vander Hart

I.D. 2-15 COUNTY 51

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the **CENTER SECTION** (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

1115 ft. from South sec. line  
(north or south)

2625 ft. from East sec. line  
(east or west)

LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ FILING # \_\_\_\_\_

SUBDIVISION none

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: Public Service

No. of acres 309 Will this be the only well on this tract? no

(8) **PROPOSED CASING PROGRAM**

Plain Casing

6 in. from +2 ft. to 3 ft.

Perforated casing  
4 in. from +2 ft. to 15 ft.

4 in. from 15 ft. to 20 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

n/a

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): Public Service No. of acres: \_\_\_\_\_

Legal description: (see front) Comanche Steam Plant / Pueblo

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Ground water level and analysis

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
<u>unknown</u>		

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**

[Signature]  
SIGNATURE OF APPLICANT(S)

WAEAD

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818  
Denver, Colorado 80203

RECEIVED

OCT 23 1987

THIS FORM MUST BE SUBMITTED  
WITHIN 60 DAYS OF COMPLETION  
OF THE WORK DESCRIBED HERE-  
ON. TYPE OR PRINT IN BLACK  
INK.

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER [REDACTED]

WATER RESOURCES  
STATE ENGINEER

WELL OWNER Public Service SW 1/4 of the SE 1/4 of Sec. 20

ADDRESS 5900 E. 39th Ave. Denver, CO 80207 T. #21 S. R. 64 W. 6 P.M.

DATE COMPLETED September 4, 1987 HOLE DIAMETER

8 in. from 0 to 13 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

DRILLING METHOD Air rotary

CASING RECORD: Plain Casing

Size 6 5/8 & kind Steel from +2.5 to 3.5 ft.

Size 4 1/2 & kind PVC from +2 to 6 ft.

Size 4 1/2 & kind PVC from 11 1/2 to 13 ft.

Perforated Casing

Size 4 1/2 & kind PVC from 6 to 11 ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

GROUTING RECORD

Material Cement

Intervals 3.5' up to surface

Placement Method Halliburton

GRAVEL PACK: Size 8-12

Interval 13' up to 4'

TEST DATA

Date Tested \_\_\_\_\_, 19\_\_

Static Water Level Prior to Test \_\_\_\_\_ ft.

Type of Test Pump \_\_\_\_\_

Length of Test \_\_\_\_\_

Sustained Yield (Metered) \_\_\_\_\_

Final Pumping Water Level \_\_\_\_\_

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	10	Brown clay	
10	13	Brown sandstone	
13		Bottom	
		Volclay seal @ 4' up to 3.5'	
		TOTAL DEPTH <u>13'</u>	

Use additional pages necessary to complete log.

# PUMP INSTALLATION REPORT

Pump Make \_\_\_\_\_

Type \_\_\_\_\_

Powered by \_\_\_\_\_ HP \_\_\_\_\_

Pump Serial No. \_\_\_\_\_

Motor Serial No. \_\_\_\_\_

Date Installed \_\_\_\_\_

Pump Intake Depth \_\_\_\_\_

Remarks \_\_\_\_\_

## WELL TEST DATA WITH PERMANENT PUMP

Date Tested \_\_\_\_\_

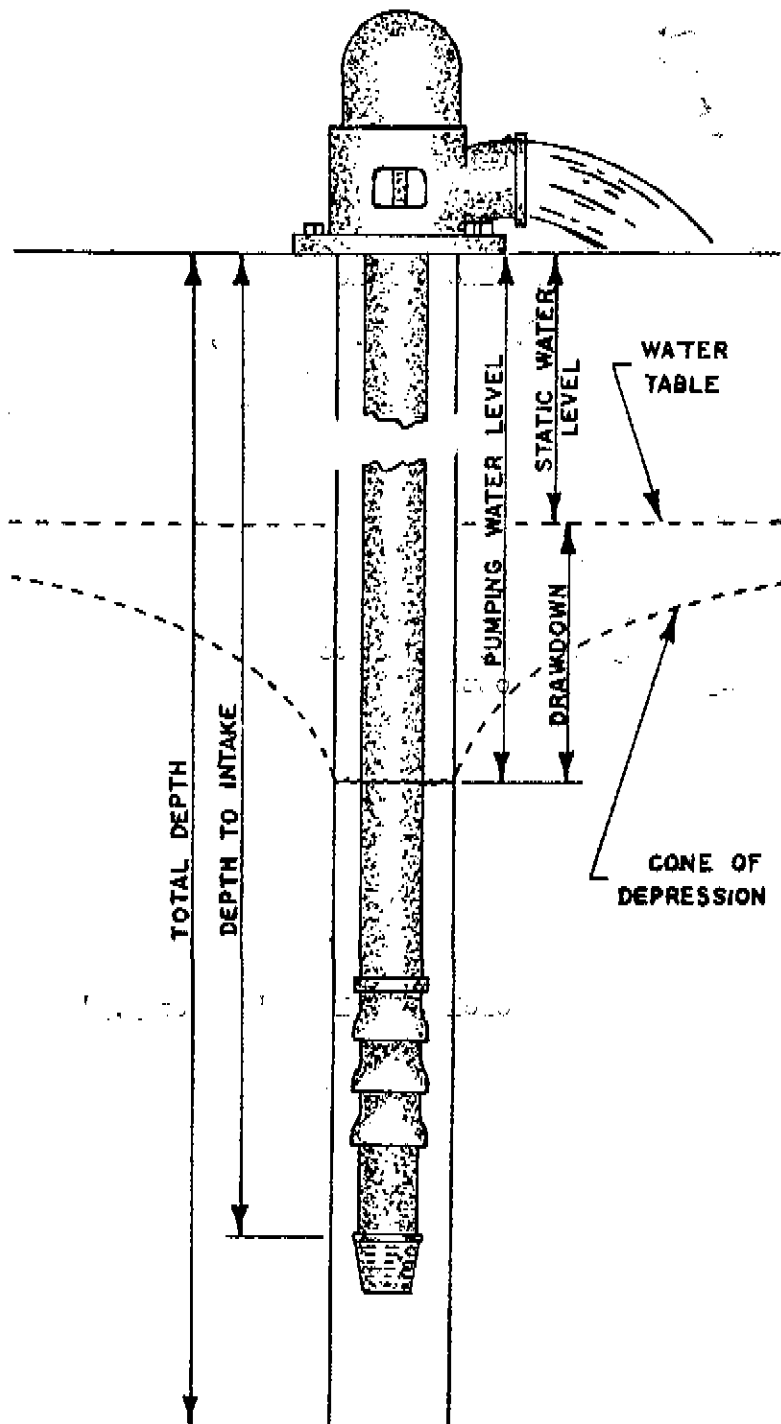
Static Water Level Prior to Test \_\_\_\_\_

Length of Test \_\_\_\_\_ Hours

Sustained yield (Metered) \_\_\_\_\_ GPM

Pumping Water Level \_\_\_\_\_

Remarks \_\_\_\_\_



## CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

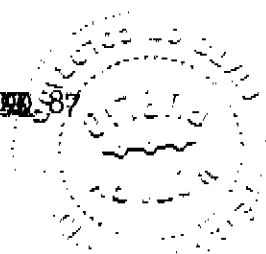
Signature George R. Hill License No. 735

State of Colorado, County of Douglas SS

Subscribed and sworn to before me this 24 day of September, 19 90

My Commission expires: February 23, 1990

Notary Public Peter J. Hill



FORM TO BE MADE OUT IN QUADRUPPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

COLORADO DIVISION OF WATER RESOURCES  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

**RECEIVED**  
AUG 20 1987  
DIV OF WATER RESOURCES  
STATE ENGINEER  
COLORADO

**PERMIT APPLICATION FORM**

Applicant must be complete where applicable. Type print in BLACK INK. No overstrikes or erasures unless initialed.

- ( ) A PERMIT TO USE GROUND WATER
- () A PERMIT TO CONSTRUCT A WELL
- ( ) A PERMIT TO INSTALL A PUMP

- ( ) REPLACEMENT FOR NO. \_\_\_\_\_
- ( ) OTHER \_\_\_\_\_

WATER COURT CASE NO. \_\_\_\_\_

**(1) APPLICANT - mailing address**

NAME Howard Noble % Public Service  
 STREET 5900 E. 39th Ave.  
 CITY Denver, Colo. 80202  
(State) (Zip)  
 TELEPHONE NO. 329-1130

**FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN**

Receipt No. 79236C  
 Basin \_\_\_\_\_ Dist. \_\_\_\_\_

**CONDITIONS OF APPROVAL**

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

**(2) LOCATION OF PROPOSED WELL**

County San Juan Pueblo  
NE 1/4 of the SW 1/4, Section 20  
 Twp. 21 S, Rng. 64 W, 6th P.M.  
(N.S) (E,W)

- 1) APPROVED PURSUANT TO C.R.S. 37-90-137(2) TO SATISFY THE PERMIT REQUIREMENTS OF C.R.S. 37-90-138(3). USE OF THIS WELL IS LIMITED TO MONITORING WATER LEVELS AND/OR WATER QUALITY SAMPLING.
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- 5) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER AND NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS. KVH 8/24/87

**(3) WATER USE AND WELL DATA**

Proposed maximum pumping rate (gpm) 0  
 Average annual amount of ground water to be appropriated (acre-feet): 0  
 Number of acres to be irrigated: 0  
 Proposed total depth (feet): 20  
 Aquifer ground water is to be obtained from:  
Alluvium  
 Owner's well designation MW-3

**GROUND WATER TO BE USED FOR:**

- ( ) HOUSEHOLD USE ONLY - no irrigation (0)
  - ( ) DOMESTIC (1) ( ) INDUSTRIAL (5)
  - ( ) LIVESTOCK (2) ( ) IRRIGATION (6)
  - ( ) COMMERCIAL (4) ( ) MUNICIPAL (8)
  - () OTHER (9) ground water monitoring
- DETAIL THE USE ON BACK IN (11)

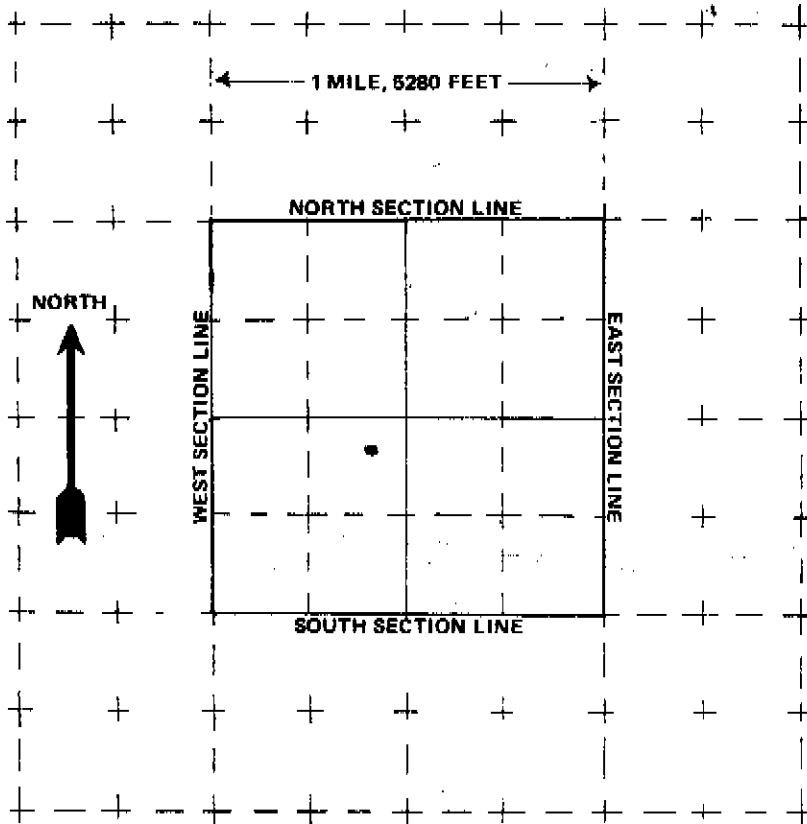
**APPLICATION APPROVED**

PERMIT NUMBER 032284 -M  
 DATE ISSUED AUG 25 1987  
 EXPIRATION DATE AUG 25 1988  
 \_\_\_\_\_  
(STATE ENGINEER)  
 BY Neil Vander Horst  
 I.D. 2-15 COUNTY 51

**(4) DRILLER**

Name Hier Drilling Co.  
 Street P.O. Box 250  
 City Castle Rock, Colo. 80104  
(State) (Zip)  
 Telephone No. 688-3012 Lic. No. 8

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the **CENTER SECTION** (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

2250 ft. from South (north or south) sec. line

2170 ft. from West (east or west) sec. line

LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ FILING # \_\_\_\_\_

SUBDIVISION None

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: Public Service

No. of acres 309 Will this be the only well on this tract? no

(8) **PROPOSED CASING PROGRAM**

Plain Casing

6 in. from +2 ft. to 3 ft.

4 in. from +2 ft. to 15 ft.  
Perforated casing

4 in. from 15 ft. to 20 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

n/a

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): Public Service No. of acres: \_\_\_\_\_

Legal description: (see front) Comanche Steam Plant / Pueblo

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Ground water level and analysis

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
<u>unknown</u>		

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**

[Signature]  
SIGNATURE OF APPLICANT(S)



WAEAD

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818  
Denver, Colorado 80203

RECEIVED

OCT 23 1987

WATER RESOURCES  
STATE ENGINEER  
COLO.

THIS FORM MUST BE SUBMITTED  
WITHIN 60 DAYS OF COMPLETION  
OF THE WORK DESCRIBED HERE-  
ON. TYPE OR PRINT IN BLACK  
INK.

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER [REDACTED]

WELL OWNER Public Service NE  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Sec. 20

ADDRESS 5900 E. 39th Ave. Denver, CO 80207 T. 21 S. R. 64 W. 6 P.M.

DATE COMPLETED September 4, 1987 HOLE DIAMETER

8 in. from 0 to 11 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

DRILLING METHOD Air rotary

CASING RECORD: Plain Casing

Size 6 5/8 & kind Steel from +2.5 to 3.5 ft.

Size 4 1/2 & kind PVC from +2 to 4 ft.

Size 4 1/2 & kind PVC from 9 to 11 ft.

Perforated Casing

Size 4 1/2 & kind PVC from 4 to 9 ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

GROUTING RECORD

Material Cement

Intervals 3.3' up to surface

Placement Method Halliburton

GRAVEL PACK: Size 8-12

Interval 11' up to 4'

TEST DATA

Date Tested \_\_\_\_\_, 19 \_\_\_\_\_

Static Water Level Prior to Test \_\_\_\_\_ ft.

Type of Test Pump \_\_\_\_\_

Length of Test \_\_\_\_\_

Sustained Yield (Metered) \_\_\_\_\_

Final Pumping Water Level \_\_\_\_\_

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	7	Brown clay	
7	11	Black shale	
11		Bottom	
		Volclay seal @ 4' up to 3.5'	
		TOTAL DEPTH <u>11'</u>	

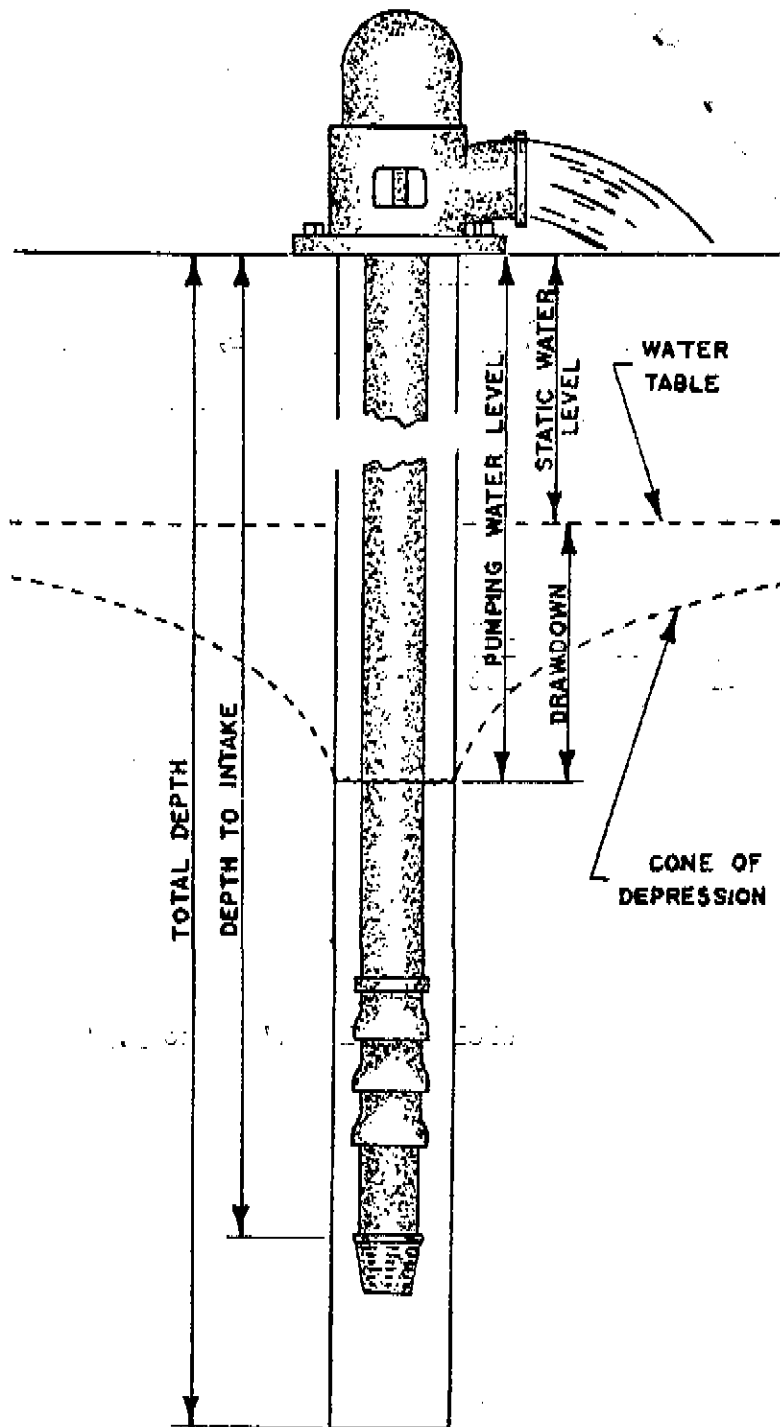
Use additional pages necessary to complete log.

# PUMP INSTALLATION REPORT

Pump Make \_\_\_\_\_  
 Type \_\_\_\_\_  
 Powered by \_\_\_\_\_ HP \_\_\_\_\_  
 Pump Serial No. \_\_\_\_\_  
 Motor Serial No. \_\_\_\_\_  
 Date Installed \_\_\_\_\_  
 Pump Intake Depth \_\_\_\_\_  
 Remarks \_\_\_\_\_

## WELL TEST DATA WITH PERMANENT PUMP

Date Tested \_\_\_\_\_  
 Static Water Level Prior to Test \_\_\_\_\_  
 Length of Test \_\_\_\_\_ Hours  
 Sustained yield (Metered) \_\_\_\_\_ GPM  
 Pumping Water Level \_\_\_\_\_  
 Remarks \_\_\_\_\_



## CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature George R. Nis License No. 735

State of Colorado, County of Douglas SS

Subscribed and sworn to before me this 24 day of September, 19 87

My Commission expires: February 23, 19 90

Notary Public Peter J. Hui

FORM TO BE MADE OUT IN QUADRUPPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer, PINK COPY is for the Owner and YELLOW COPY is for the Driller.

**RECEIVED**  
JUN 20 1987

**PERMIT APPLICATION FORM**

Application must be complete where applicable. Print in **BLACK INK**. No overstrikes or erasures unless initialed.

**STATE ENGINEER**  
**COLORADO**

- ( ) A PERMIT TO USE GROUND WATER
- A PERMIT TO CONSTRUCT A WELL
- ( ) A PERMIT TO INSTALL A PUMP

( ) REPLACEMENT FOR NO. \_\_\_\_\_

( ) OTHER \_\_\_\_\_

WATER COURT CASE NO. \_\_\_\_\_

**(1) APPLICANT - mailing address**

NAME Howard Noble % Public Service

STREET 5900 E. 39th Ave.

CITY Denver, Colo. 80207  
(State) (Zip)

TELEPHONE NO. 329-1130

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 79236 D1

Basin \_\_\_\_\_ Dist. \_\_\_\_\_

**(2) LOCATION OF PROPOSED WELL**

County San Juan Pueblo

SW 1/4 of the SW 1/4, Section 20

Twp. 21 S, Rng. 64 W, 6th P.M.  
(N.S) (E.W)

**CONDITIONS OF APPROVAL**

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

**(3) WATER USE AND WELL DATA**

Proposed maximum pumping rate (gpm) 0

Average annual amount of ground water to be appropriated (acre-feet): 0

Number of acres to be irrigated: 0

Proposed total depth (feet): 20

Aquifer ground water is to be obtained from:  
Alluvium

- 1) APPROVED PURSUANT TO C.R.S. 37-90-137(2) TO SATISFY THE PERMIT REQUIREMENTS OF C.R.S. 37-90-138(3). USE OF THIS WELL IS LIMITED TO MONITORING WATER LEVELS AND/OR WATER QUALITY SAMPLING.
- 2) THIS WELL MUST BE EQUIPPED WITH A LOCKING CAP OR SEAL TO PREVENT WELL CONTAMINATION OR POSSIBLE HAZARDS AS AN OPEN WELL. THE WELL MUST BE KEPT LOCKED AT ALL TIMES EXCEPT DURING SAMPLING OR MEASURING.
- 3) RECORDS OF WATER LEVEL MEASUREMENTS AND WATER QUALITY ANALYSES SHALL BE MAINTAINED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES UPON REQUEST.
- 4) UPON CONCLUSION OF THE MONITORING PROGRAM, THE APPLICANT SHALL PLUG AND ABANDON THIS WELL IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR WATER WELL CONSTRUCTION AND PUMP INSTALLATION CONTRACTORS.
- 5) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER AND NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS. *KVH 7/24/87*

Owner's well designation MW-4

**GROUND WATER TO BE USED FOR:**

- ( ) HOUSEHOLD USE ONLY - no irrigation (0)
- ( ) DOMESTIC (1)
- ( ) LIVESTOCK (2)
- ( ) COMMERCIAL (4)
- ( ) INDUSTRIAL (5)
- ( ) IRRIGATION (6)
- ( ) MUNICIPAL (8)

OTHER (9) ground water monitoring

DETAIL THE USE ON BACK IN (11)

**APPLICATION APPROVED**

PERMIT NUMBER 032285 - M

DATE ISSUED AUG 25 1987

EXPIRATION DATE AUG 25 1988

**(4) DRILLER**

Name Hier Drilling Co

Street P.O. Box 250

City Castle Rock, Colo. 80104  
(State) (Zip)

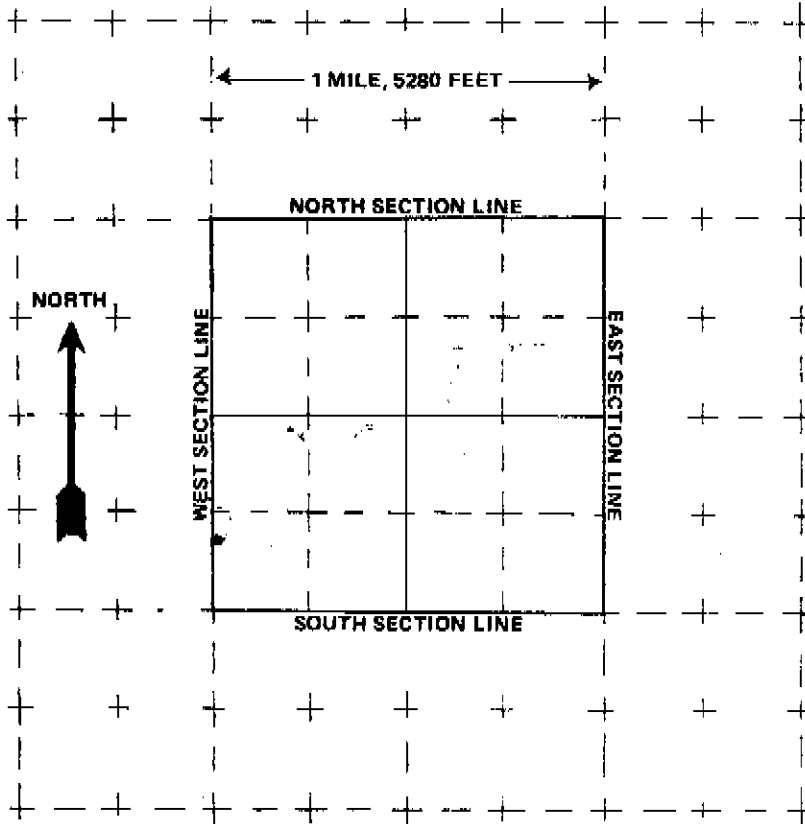
Telephone No. 688-3012 Lic. No. 8

BY [Signature] STATE ENGINEER

BY [Signature]

I.D. 2-15 COUNTY 51

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the **CENTER SECTION** (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

1070 ft. from South sec. line  
(north or south)

35 ft. from West sec. line  
(east or west)

LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ FILING # \_\_\_\_\_

SUBDIVISION none

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: Public Service

No. of acres 309 Will this be the only well on this tract?  no

(8) **PROPOSED CASING PROGRAM**

Plain Casing

6 in. from +2 ft. to 3 ft.

4 in. from +2 ft. to 15 ft.  
Perforated casing

4 in. from 15 ft. to 20 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

n/a

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): Public Service No. of acres: \_\_\_\_\_

Legal description: (See front) Comanche Steam Plant/Pueblo

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Ground water level & analysis

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
<u>unknown</u>		

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**

[Signature]  
SIGNATURE OF APPLICANT(S)

WAEAD

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818  
Denver, Colorado 80203

RECEIVED

OCT 23 1987

THIS FORM MUST BE SUBMITTED  
WITHIN 60 DAYS OF COMPLETION  
OF THE WORK DESCRIBED HERE-  
ON. TYPE OR PRINT IN BLACK  
INK.

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER [REDACTED]

WATER RESOURCES  
STATE ENGINEER  
COLO.

WELL OWNER Public Service SW          ¼ of the SW          ¼ of Sec. 20

ADDRESS 5900 E. 39th Ave. Denver, CO 80207 T. 21 S.          R. 64 W.          6          P.M.

DATE COMPLETED September 4, 19 87 HOLE DIAMETER

8 in. from 0 to 29 ft.

         in. from          to          ft.

         in. from          to          ft.

DRILLING METHOD Air rotary

CASING RECORD: Plain Casing

Size 6 5/8 & kind Steel from +2.5 to 3.5 ft.

Size 4 1/2 & kind PVC from +2 to 7 ft.

Size 4 1/2 & kind PVC from 27 to 29 ft.

Perforated Casing

Size 4 1/2 & kind PVC from 7 to 27 ft.

Size          & kind          from          to          ft.

Size          & kind          from          to          ft.

GROUTING RECORD

Material Cement

Intervals 3.5' up to surface

Placement Method Halliburton

GRAVEL PACK: Size 8-12

Interval 29' up to 4'

TEST DATA

Date Tested         , 19         

Static Water Level Prior to Test          ft.

Type of Test Pump         

Length of Test         

Sustained Yield (Metered)         

Final Pumping Water Level         

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	7	Brown clay	
7	27	Sand & gravel	
27	29	Brown clay	
29		Bottom	
		Volclay seal @ 4' up to 3.5'	
		TOTAL DEPTH <u>29'</u>	

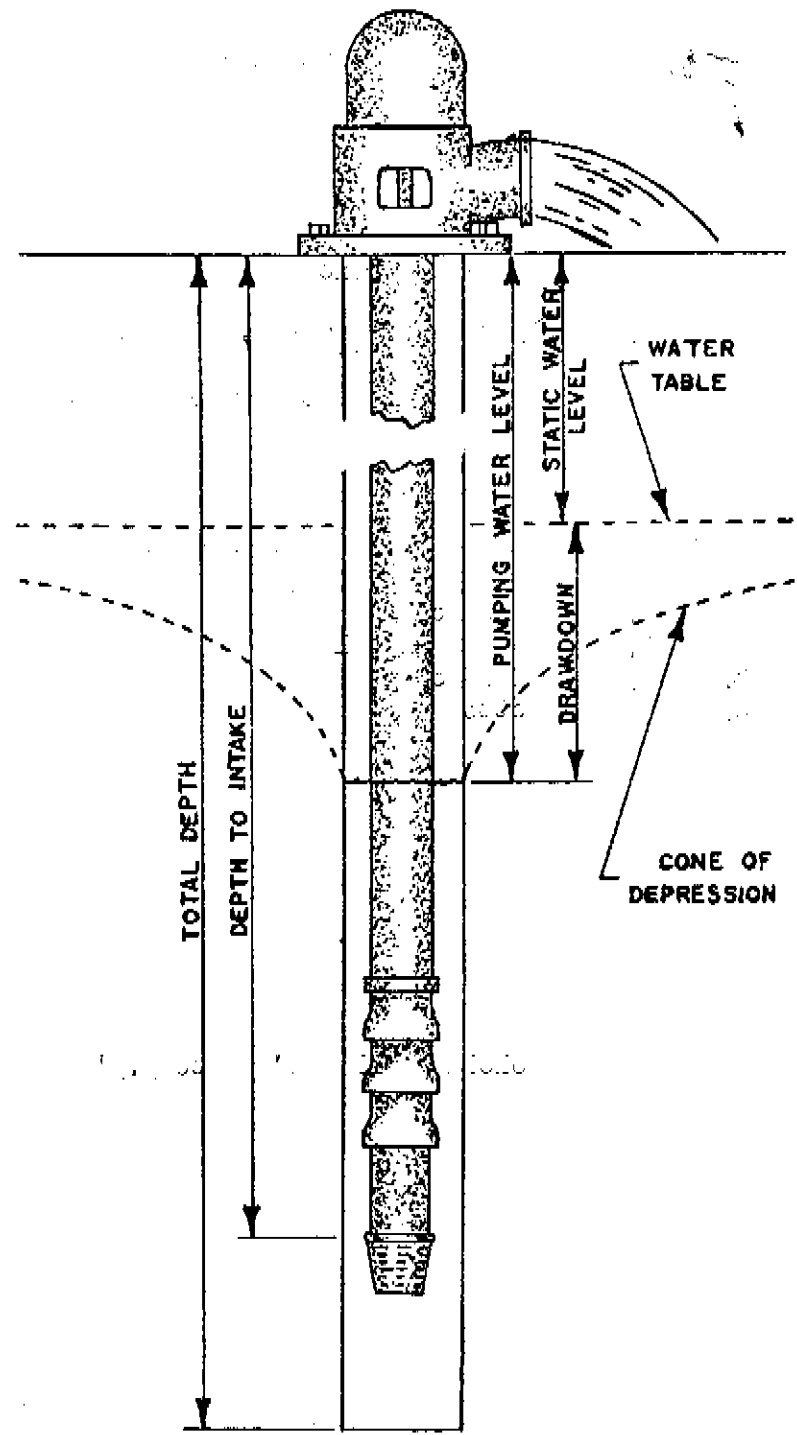
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