1. WELL PERMIT NUMBER: 210286

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

3. WELL LOCATION AS DRILLED:
   **DISTANCES FROM SEC. LINES:**
   - 3,940 ft. from N Sec. line
   - 830 ft. from S Sec. line
   **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:

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description of Material</th>
<th>Type</th>
<th>Color</th>
<th>Water Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>0'-2'</td>
<td>COAL DUST, MIXED WITH SILT</td>
<td>LOOSE, DRY, BROWN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2'-29.5'</td>
<td>CLAY, STIFF, MORE SANDY AND GRAVELLY WITH DEPTH, DRY TO MOIST, BROWN, RUST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.5'-30'</td>
<td>CLAYSTONE, WEATHERED, STIFF, BLOCKY, MOIST, OLIVE, RED</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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)

| 4 | 0 | 30 |

7. PLAIN CASING

<table>
<thead>
<tr>
<th>OD (in)</th>
<th>Kind</th>
<th>Wall Size</th>
<th>From(ft)</th>
<th>To(ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 PVC</td>
<td></td>
<td></td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>

PERF. CASING: Screen Slot Size: 20

| 2 PVC | 14 | 29 |

8. FILTER PACK:

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA SAND</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Interval</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/20</td>
<td>13' - 29'</td>
<td>CONCRETE 150PCF 0'-3.5' POURED</td>
</tr>
</tbody>
</table>

9. PACKER PLACEMENT:

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA SAND</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Interval</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/20</td>
<td>13' - 29'</td>
<td>CONCRETE 150PCF 0'-3.5' POURED</td>
</tr>
</tbody>
</table>

10. GROUTING RECORD:

<table>
<thead>
<tr>
<th>Material</th>
<th>Density</th>
<th>Interval</th>
<th>Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONCRETE</td>
<td>150PCF</td>
<td>0'-3.5'</td>
<td>POURED</td>
</tr>
</tbody>
</table>

11. DISINFECTION:

<table>
<thead>
<tr>
<th>Type</th>
<th>Amnt. Used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. WELL TEST DATA:

<table>
<thead>
<tr>
<th>TESTING METHOD</th>
<th>Static Level</th>
<th>ft. Date/Time measured</th>
<th>Production Rate</th>
<th>gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pumping level</td>
<td>ft. Date/Time measured</td>
<td>Test length (hrs.)</td>
<td>Remarks THIS IS A MONITORING WELL SO THIS ITEM NOT APPLICABLE.</td>
<td></td>
</tr>
</tbody>
</table>

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.

Name/Title (Please type or print) [Signature]  Frank J. Holliday, PE / PRINCIPAL

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

WELL PERMIT NUMBER 210286
DIV. 2  CNTY. 51  WD 15  DES. BASIN MD

APPLICANT

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

(303)294-8566

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

Receipt No. 0430074C  DATE ISSUED  JUN 09 1998  EXPIRATION DATE  JUN 09 2000
**MONITORING/OBSERVATION**

Review instructions prior to completing form.

### 1. APPLICANT INFORMATION

<table>
<thead>
<tr>
<th>Name of applicant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Service Company of Colorado</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mailing Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1225 17th Street, Suite 900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Zip code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denver</td>
<td>CO</td>
<td>80202</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone number (include area code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(303) 294-8566</td>
</tr>
</tbody>
</table>

### 2. TYPE OF APPLICATION (check applicable box(es))

- [X] Use existing well
- [ ] Replacement for --
- [ ] Construct new well
- [ ] Other:

### 3. REFER TO (if applicable):

<table>
<thead>
<tr>
<th>Monitoring hole acknowledgment</th>
<th>Well name or #</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH-30645</td>
<td>W-3</td>
</tr>
</tbody>
</table>

### 4. LOCATION OF WELL

<table>
<thead>
<tr>
<th>County</th>
<th>Pueblo</th>
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<tr>
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<table>
<thead>
<tr>
<th>Section</th>
<th>Township N or S</th>
<th>Range E or W</th>
<th>Quarter</th>
<th>SE</th>
<th>Quarter</th>
<th>Principal Meridian</th>
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<tbody>
<tr>
<td>20</td>
<td>21</td>
<td>64</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distance of well from section lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,940 ft. from N S 830 ft. from E W</td>
</tr>
</tbody>
</table>

Well location address, if different from applicant address (if applicable)

Comanche Station

2005 Lime Road, Pueblo, CO 81006

For replacement wells only - distance and direction from old well to new well feet direction

### 5. OWNERSHIP INFORMATION

**WELL OWNER NAME** (if different than applicant)

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone no. (include area code)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
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</table>

**PROPERTY OWNER NAME** (if different than above)

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone no. (include area code)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### 6. USE OF WELL

- [X] GROUND WATER SAMPLING (quality)
- [ ] MONITOR WATER LEVELS
- [ ] OTHER:

### 7. WELL DATA

<table>
<thead>
<tr>
<th>Total depth</th>
<th>Aquifer</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 feet</td>
<td></td>
</tr>
</tbody>
</table>

### 8. CONSULTANT INFORMATION (optional)

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Address</th>
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<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone number (include area code)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### 9. PROPOSED WELL DRILLER (optional)

<table>
<thead>
<tr>
<th>Company name</th>
<th>License number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10. SIGNATURE of applicant(s) or authorized agent

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.

**Charles H. Fuller**

Title: General Manager, Commodity Manager, Services

Date: 4-27-98

See the reverse side of this form for instructions, fee, and advisory information

### OPTIONAL INFORMATION

<table>
<thead>
<tr>
<th>USGS map name</th>
<th>DWR map no.</th>
<th>Surface elev.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F99 I</td>
<td></td>
</tr>
</tbody>
</table>

Office Use Only

<table>
<thead>
<tr>
<th>DIV</th>
<th>CO</th>
<th>WD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHECKS</th>
<th>DIV OR WATER RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR#430074 051198 180.00</td>
<td>USE MD</td>
</tr>
</tbody>
</table>

Form GWS-46 (12/95)
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. 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, ¼-¼ (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 (719-589-6883), Montrose (970-249-6622), Glenwood Springs (970-945-5865), Steamboat Springs (970-879-0272), or Durango (970-247-1845).

COLORADO DIVISION OF WATER RESOURCES, 1313 SHERMAN STREET, ROOM 821, DENVER, CO 80203
PHONE 303-866-3587 (Information), 303-866-3581 (Main), 303-866-3447 (Well & Water Rights Records), 303-866-3589 (Fax)
<table>
<thead>
<tr>
<th>RECEIPT NUMBER</th>
<th>NO VALID MH NUMBER</th>
<th>NOTICE NOT PRIOR TO CONST</th>
<th>NOT PERMITTED WITHIN YEAR</th>
<th>IMPROPER CASING</th>
<th>IMPROPER CONSTRUCTION</th>
<th>GROUT</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>433074A</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
July 8, 1998

John Bilisoly
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 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.
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        Mark Andorka – PSC
     Olon Plunk – NCS        Dean Metcalf – NCS
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
**Monitoring Well Construction Summary**

**Job No.** 26,020  
**Job Name**  COMANCHE  
**Engineer**  SCHNEIDER  
**Installation Date**  5/20/97  
**Ground Elevation**  4807

**Depth Log of Boring**

<table>
<thead>
<tr>
<th>Depth From</th>
<th>Depth To</th>
<th>Soil Symbol</th>
<th>Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>FILL</td>
<td>COAL DUST AND SILT, DRY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LOOSE, BROWN, BLACK</td>
</tr>
<tr>
<td>2</td>
<td>29.5</td>
<td>CL</td>
<td>CLAY, DRY TO MOIST, STIFF,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BLOCKY, INCR EASING SAND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>AND GRAVEL WITH DEPTH</td>
</tr>
<tr>
<td>29.5</td>
<td>30</td>
<td>BR</td>
<td>CLAYSTONE, WEATHERED,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BLOCKY, STIFF MOIST, OLIVE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RED</td>
</tr>
</tbody>
</table>

**Remarks:**

**Well Detail**

- **PVC Cap Type**: Lockable J-Plug
- **Lock Type**: Limited Access Monitoring Well Protector Type
- **Steel Protector Type**: Steel Riser
- **Cement Mix Type**: Quickrete
- **Seal Material Type**: Hole Plug Bentonite
- **ID of Riser Pipe**: 2-Inch
- **Type of Pipe**: PVC
- **Filter Material Type**: 10/20 Silica Sand
- **Type of Screen Pipe**: PVC
- **Size of Openings**: 20-Slot
- **Diameter of Boring**: 4-Inch

**Dimensions:**

- L1: 2 Feet  
- L2: 3.5 Feet  
- L3: 9.5 Feet  
- L4: 16 Feet  
- L5: 14 Feet  
- L6: 15 Feet  
- L7: 31 Feet
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
RE: Request for Variance, Monitoring Holes MH-30645, (W-1, W-2 and W-3) Public Service Company, Comanche Station, Sec. 20, T21S, R64W, 6th 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,

[Signature]

George D. VanSlyke
Chief, Geotechnical Services

cc: Well File MH-30645
December 1, 1999

John Bilisoly
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

Permit Application Form

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

(1) Applicant: mailing address
NAME: Howard Noble, 96 Public Service
STREET: 6900 E. 39th Ave.
CITY: Denver, Colo. 80227
TELEPHONE NO.: 329-1130

(2) Location of Proposed Well
County: Pueblo
Sec. % of the SW % Section 20
Twp. 21 S, Rng. 64 W, 6th P.M.

(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 to be obtained from: Alluvium
Owner's well designation: M8-1

Ground Water to be Used For:
( ) Household Use Only - No irrigation (0)
( ) Domestic (1) ( ) Industrial (5)
( ) Livestock (2) ( ) Irrigation (8)
( ) Commercial (4) ( ) Municipal (8)
( ) Other (9) Ground water monitoring
Detail the use on back in (11)

(4) Driller
Name: Hier Drilling Co.
Street: P.O. Box 260
City: Castle Rock, Colo. 80104
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 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. 37-90-136(3). Use of this well is limited to monitoring ground 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. 4/24/57

Application Approved

Permit Number: 032282-M
Date Issued: Aug 25, 1987
Expiration Date: Aug 25, 1988

By: [Signature]
(State Engineer)
ID: 2 - 15 County: 3
(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.

(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)
LOTT BLOCK FILING #
SUBDIVISION

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: Public Service
No. of acres 90. 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:

(10) LAND ON WHICH GROUND WATER WILL BE USED:
Owner(s): Public Service.
No. of acres:
Legal description: (see foot) 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

unknown

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

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.
WELL LOG

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Type and Color of Material</th>
<th>Water Lcc.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5</td>
<td>Brown clay</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>11</td>
<td>Brown clay &amp; gray shale</td>
<td></td>
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<tr>
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<td></td>
<td>Bottom</td>
<td></td>
</tr>
</tbody>
</table>

Volclay seal @ 4' up to 3.5'

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.
- Porforated Casing
- Size 4 1/2 & kind PVC from 4 to 9 ft.
- & kind from to ft.
- & 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: 

TOTAL DEPTH 11'

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 ____________________________ License No. 735
State of Colorado, County of Douglas SS
Subscribed and sworn to before me this ______ day of September 24, 1987.
My Commission expires: February 23, 1990
Notary Public ____________________________

FORM TO BE MADE OUT IN QUADRUPLICATE. 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

PERMIT APPLICATION FORM

( ) 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

TELEPHONE NO.: 329-1130

(2) LOCATION OF PROPOSED WELL

County: Pueblo

Sec. 1/4 of the Sec. 1/4, Section 20

Twp. 21 S., Rng. 64 W., 6th P.M.

(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)

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name: Aier Drilling Co.

Street: P.O. Box 250

City: Castle Rock, Colo. 80104

Telephone No.: 685-2012, Lic. No.: 8

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 992363

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.

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. 5/19/77

APPLICATION APPROVED

PERMIT NUMBER: 032283-M

DATE ISSUED: AUG 25 1987

EXPIRATION DATE: AUG 25 1988

BY: 

I.D.: 2015 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? Yes

(8) PROPOSED CASING PROGRAM

Plain Casing 6 in. from 12 ft. to 3 ft.
2 in. from 12 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:

No

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

Owner(s): Public Service

Legal description: (see front) Conocoche Creek 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

Unknown

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

Signature of Applicant(s)

Use additional sheets of paper if more space is required.
**WELL LOG**

<table>
<thead>
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<th>Water Loc.</th>
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<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>Brown clay</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>Brown sandstone</td>
<td></td>
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<td>Bottom</td>
<td></td>
</tr>
</tbody>
</table>

Volclay seal @ 4' up to 3.5'

**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 42.5 to 35 ft.

Size 4 1/2" & kind PVC from 22 to 6 ft.

Size 4 3/8" & kind PVC from 118 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
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 _____________________________ License No. 735
State of Colorado, County of ____________ Douglas ____________ SS
Subscribed and sworn to before me this 24 day of September, 1990
My Commission expires: __________________ Notary Public

FORM TO BE MADE OUT IN QUADRUPLE: 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 Blvd., 1313 Sherman St., Denver, Colorado 80203

PERMIT APPLICATION FORM

(Applicant must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures are allowed.)

(1) APPLICANT - mailing address

NAME
Howard Noble & S Public Service

STREET
5900 E. 39th Ave.

CITY
Denver, Colo. 80207

TELEPHONE NO.
329-1130

(2) LOCATION OF PROPOSED WELL

County
Pueblo

NE ¼ of the SW ¼, Section 20

Twp. 21 S, Rng. 64 W, 6th P.M.

(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)

(4) DRILLER

Name
Hier Drilling Co.

Street
P.O. Box 250

City
Castle Rock, Colo. 80104

Telephone No.
638-3012 Lic. No. 8

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.

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 UNTIL 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 APPLICANT. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.

APPLICATION APPROVED

PERMIT NUMBER 032284-M

DATE ISSUED AUG 25 1987

EXPIRATION DATE AUG 25 1988

BY /s/ A. Daniels

I.D. 2015 COUNTY 5/1
(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.

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

270 ft. from _______ sec. line
(north or south)

270 ft. from _______ sec. line
(east or west)

LOT______ BLOCK______ FILING______
SUBDIVISION______

(7) TRACT ON WHICH WELL WILL BE
LOCATED Owner: Public Service
No. of acres______ Will this be the only well on this tract?______

(8) PROPOSED CASING PROGRAM
Plain Casing

6 in. from ______ ft. to ______ ft.

Perforated casing

4 in. from ______ ft. to ______ ft.

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

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

Owner(s): Public Service

Legal description: (See Survey) Comanche Steam Plant (Rufino)

(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

unknown

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

Signature of Applicant(s)
WELL LOG

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<tr>
<td></td>
<td></td>
<td>Bottom</td>
<td></td>
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</tbody>
</table>

Volclay seal @ 4' up to 3.5'

HOLE DIAMETER

- 8 in. from 0 to 11 ft.
- _____ in. from _____ to _____ ft.
- _____ in. from _____ to _____ ft.

DRILLING METHOD: Air rotary

CASING RECORD:

- 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: 8-12
- Interval: 11' up to 4'

TEST DATA

- Date Tested: 19
- Static Water Level Prior to Test
- Type of Test Pump
- Length of Test
- Sustained Yield (Metered)
- Final Pumping Water Level

TOTAL DEPTH: 11'
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 ___________________________ 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 ____________________________

FORM TO BE MADE OUT IN QUADRUPLE: 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

PERMIT APPLICATION FORM

( ) 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.

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN
Receipt No. 79236

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 a 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 APPLICANT. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS. KH/1/4/87

APPLICATION APPROVED

PERMIT NUMBER 032285-M
DATE ISSUED AUG 25 1987
EXPIRATION DATE AUG 25 1988

[Signature]
STATE ENGINEER

[Signature]
WELL INSPECTOR
I.D. __________ COUNTY ___

(1) APPLICANT - mailing address
NAME Howard Noble, & Public Service
STREET 5900 E. 39th Ave.
CITY Denver, Colo. 80227
TELEPHONE NO. 329-1130

(2) LOCATION OF PROPOSED WELL
County Pueblo
SW 1/4 of the SW 1/4, Section 20
Twp. 21 S., Rng. 57 W., 6th P.M.

(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-4

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)

(4) DRILLER
Name Hier Drilling Co.
Street P.O. Box 250
City Castle Rock Colo. 80104
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.

![Diagram of well location with distances and coordinates](image)

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

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

- **South** sec. line
- **West** sec. line

LOT BLOCK FILING

SUBDIVISION

(7) **TRACT ON WHICH WELL WILL BE LOCATED**

Owner: **Public Service**

No. of acres **809**

Will this be the only well on this tract? **No**

(8) **PROPOSED CASING PROGRAM**

Plain Casing

- 6 in. from 12 ft. to 3 ft.

Perforated casing

- 4 in. from 15 ft. to 20 ft.

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

(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

**Unknown**

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

**Signature of Applicant(s):**
**WELL LOG**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Type and Color of Material</th>
<th>Water Loc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7</td>
<td>Brown clay</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>27</td>
<td>Sand &amp; gravel</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>29</td>
<td>Brown clay</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>Bottom</td>
<td></td>
</tr>
</tbody>
</table>

Volclay seal @ 4' up to 3.5'

**HOLE DIAMETER**

- 8 in. from 0 to 29 ft.
- in. from to ft.
- in. from to ft.

**DRILLING METHOD** Air rotary

**CASING RECORD**

- 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
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 ____________________________ 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 __________________________

FORM TO BE MADE OUT IN QUADRUPLE: 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.