



Western Water & Land, Inc.

May 3, 2013

Mr. Brandon Danforth
Environmental Specialist
WPX Energy Rocky Mountain LLC
1058 County Road 215
Parachute, Colorado 81635

RE: Baseline Water Quality Sampling Evaluation – CMU 22-33 Drill Pad

Dear Mr. Danforth,

Western Water & Land, Inc. (WWL) has completed a hydrologic water source evaluation for the WPX Energy Rocky Mountain LLC (WPX) CMU 22-33 Drill Pad in accordance with COGCC Rule 609. The evaluation considered all water sources as defined in Rule 609 within a 0.5-mile radius of the referenced drill pad. Water sources located on the basis of section quarters were included in the evaluation if the any portion of the section quarter(s) lies within the 0.5-mile radius area. A preliminary screening of the water sources was completed to identify the sources considered to be potentially available for sampling pending results of the owner questionnaire and field inspections to verify sampling feasibility and the consent of the structure owners. Each potentially available water source was then evaluated to identify the preferred sources for the baseline program. If the resulting number of potentially available sources was four or less, all of the sources were included in the list of preferred sources. If more than four sources were potentially available, the sources were prioritized based on WWL's hydrologic knowledge of the region, general hydrologic rationale, and in accordance with the guidelines specified in Rule 609.

Water Sources

Water sources as defined in Rule 609 include water wells registered with the Colorado Division of Water Resources (DWR), permitted or adjudicated springs, and monitoring wells installed for baseline sampling and monitoring under COGCC Rules 318A.e(4), 608, or 609. Water sources located within a 0.5-mile radius of the CMU 22-33 Drill Pad are shown in Figure 1. Well permit files are included for all wells located within the 0.5-mile radius evaluation area in Attachment A. Structure owners are identified as reported in DWR databases. Property owners are identified as reported in county property records. The water sources within a 0.5-mile radius of the drill pad are summarized as follows:

- Water Well (Permit No.229106; Permit Issued and Completed)
 - Well Permit Applicant Owner:
Lee Morgan
1205 Walz Ave.
Glenwood Springs, Colorado 81601
 - Land Owner:

Morgan Ranch LLLP
1400 Fir Court
Rifle, Colorado 81650

- Uses: Domestic Irrigation
- Location Accuracy: Spotted from Section Lines

Potentially Available Water Sources

Each water source identified within the 0.5-mile radius area is considered to be a potentially available water source unless existing information suggests that the water source would not be suitable for the baseline water quality program. The following water sources are considered potentially available for inclusion in the program:

- Water Well (Permit No. 229106; Permit Issued and Completed)

Preferred Water Sources

In accordance with Rule 609, all available water sources within a 0.5-mile radius of the drill pad, up to a maximum of four sources must be included in the baseline and subsequent monitoring program. Because only one potentially available water source was located within 0.5 miles of the CMU 22-33 Drill Pad, this source is considered to be a preferred water source. The preferred potentially available water source is as follows:

- Water Well (Permit No. 229106; Permit Issued and Completed)

The preferred water source will be incorporated into the baseline water quality monitoring program provided the structures exist, and the structure owner, or land owner if the structure owner is not known, grants approval to sample the source and inspection of the structure confirms that a representative sample can be obtained from the structure.

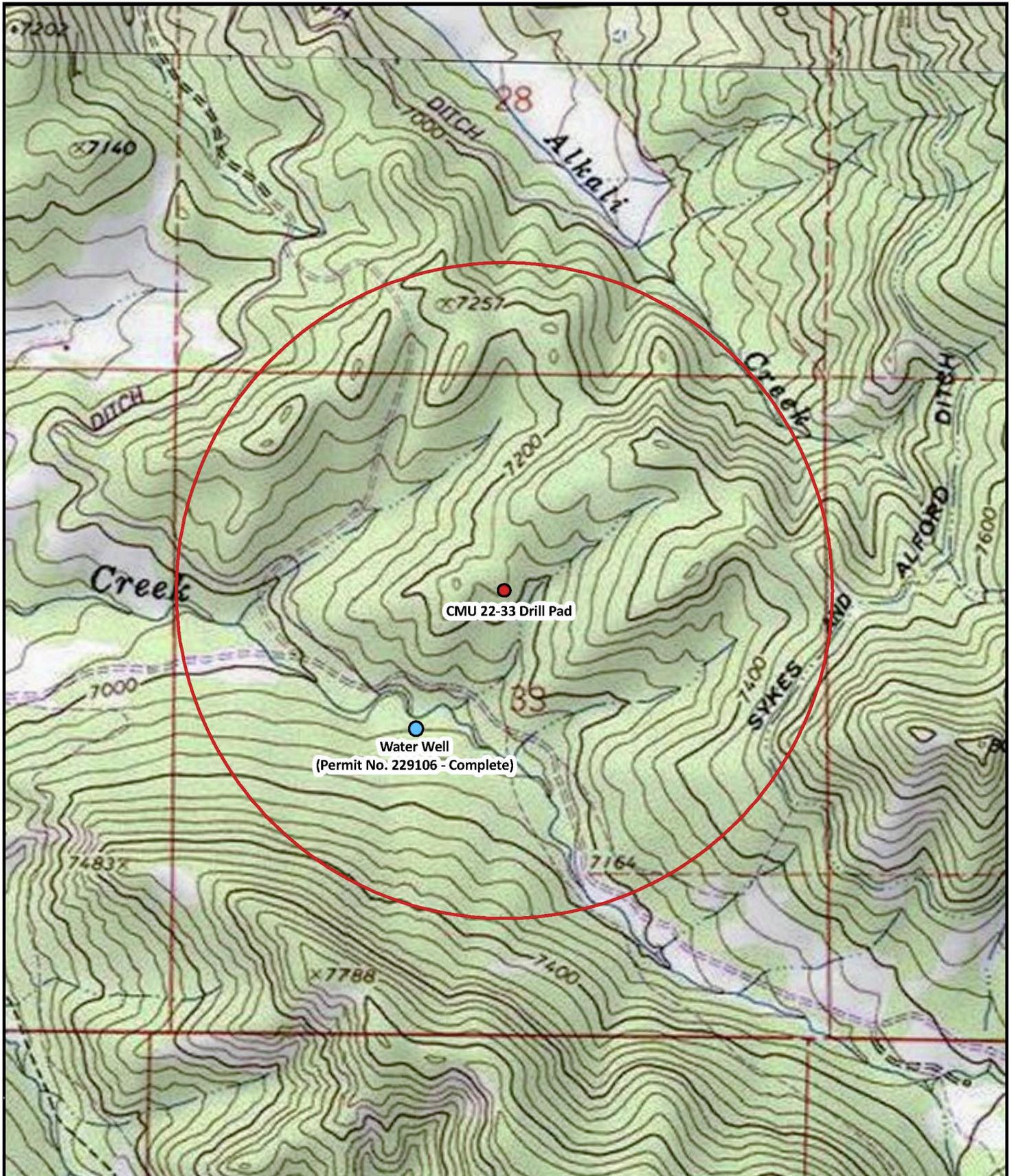
If you have any questions or concerns, please contact me at (970) 242-0170.

Sincerely,



Bruce D. Smith
Principal Hydrogeologist
WESTERN WATER & LAND, INC.

Attachments



Legend

- Permitted Well
- Drill Pad CMU 22-33
- Deeded Spring
- 0.5-Mile Radius Evaluation Area

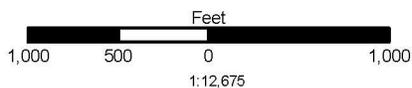


Figure 1: Drill Pad Location CMU 22-33
 0.5 Mile Radius Water Source Evaluation
 WPX Energy Rocky Mountain LLC

Garfield County, Colorado

SW1/4NE1/4 Sec 33 Tws 6S R 90W

Basemap Source: Bing Maps and Esri ArcGIS Online



Western Water & Land, Inc.
 Applications in Earth Science

Attachment A

Water Source Records

OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

APPLICANT

| | | | |
|--------------------|-------|------------|----|
| WELL PERMIT NUMBER | | 229106 | |
| DIV. 5 | WD 45 | DES. BASIN | MD |

LEE MORGAN
1205 WALZ AVE.
GLENWOOD SPRINGS, CO 81601-

(970) 945-6351

APPROVED WELL LOCATION

GARFIELD COUNTY
NE 1/4 SW 1/4 Section 33
Township 6 S Range 90 W Sixth P.M.

DISTANCES FROM SECTION LINES

2540 Ft. from South Section Line
1950 Ft. from West Section Line

PERMIT TO CONSTRUCT A 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 this 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)(II)(A) as the only well on a tract of land of 40 acres described as the NE 1/4, SW 1/4, Sec. 33, Twp. 6 South, Rng. 90 West, 6th P.M., Garfield County.
- 4) The use of ground water from this well is limited to fire protection, ordinary household purposes inside not more than three (3) single family dwellings, the watering of poultry, domestic animals and livestock on a farm or ranch and the irrigation of not more than one (1) acre of home gardens and lawns.
- 5) The maximum pumping rate of this well shall not exceed 15 GPM.
- 6) The return flow from the use of this well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
- 7) This well shall be constructed not more than 200 feet from the location specified on this permit.

NOTE: Parcel Identification Number (PIN): 23-2183-332-00-013

NOTE: Assessor Tax Schedule Number: 017220 (totaling 320 acres)

D M W
10/10/2000

APPROVED
DMW

Hel A. Sijman
State Engineer

DATE ISSUED **OCT 10 2000**

Bylt R. R. R. R.
By EXPIRATION DATE **OCT 10 2002**

Receipt No. 9500246

RECEIVED

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

RECEIVED
OCT 16 2000

SEP 06 '00

11

WATER RESOURCES
STATE ENGINEER
WATER ENGINEERING
STATE ENGINEER
WATER ENGINEERING
STATE ENGINEER
Water Well Permit Application
Must be completed in black ink or typed

NEW 35+ ACRE RESIDENTIAL
Review instructions prior to completing form

1. APPLICANT INFORMATION

Name of applicant
Lee Morgan

Mailing Address
1205 Walz Ave.

City
Glenwood Springs

State
Co.

Zip code
81601

Telephone Number (include area code)
970-945-6351

6. USE OF WELL (check appropriate entry or entries)

A. Ordinary household purposes in up to 3 single-family dwellings, the watering of domestic animals, and the irrigation of not more than one (1) acre of home gardens and lawns

B. Livestock watering (on farm/ranch/range/pasture)

2. TYPE OF APPLICATION

CONSTRUCT A NEW WELL ON A TRACT OF LAND OF 35 ACRES OR MORE

7. WELL DATA

MAXIMUM PRODUCTION RATE OF THE WELL SHALL NOT EXCEED 15 GPM

3. REFER TO (if applicable):

Monitoring hole acknowledgment #
MH-

8. TYPE OF RESIDENTIAL SEWAGE SYSTEM

Septic tank / absorption leach field

Central system

District name: _____

Vault
Location sewage to be hauled to: _____

Other (attach copy of engineering design)

4. LOCATION OF WELL

| | | |
|--------------------|---------------------------|--------------------------------|
| County Garfield | Quarter/quarter NE 1/4 | Quarter SW 1/4 |
| Section 33 | Township N or S 6 | Range E or W 90 |
| | | Principal Meridian 6th P.M. |

Distance of well from section lines
2540 ft. from N S 1950 ft. from E W

Well location address, if different from applicant address (if applicable)
8186 County Rd. 312

9. PROPOSED WELL DRILLER (optional)

Name
Shelton Drilling Co.

License number
1095

5. TRACT ON WHICH WELL WILL BE LOCATED

A.
ATTACH LEGAL DESCRIPTION FOR 35+ ACRE TRACT

Development - None

Name - Ranch

Lot no. _____ Unit # _____

Other Garfield NE 1/4 SW 1/4 Sect. 33
65 - R. 90W - 6th P.M. f.m.

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.

Must be original signature
Lee Morgan

B. STATE PARCEL
ID# (optional):

C. # acres in tract
~~35~~ 40 A.M.

D.
THIS WILL BE THE ONLY WELL ON THIS TRACT

True
Owner

Date
9/6/2000

Office Use Only CENTER MOUNTAIN CO
Receipt # 9500246
Permit # 229106
Well owner
TAB
ALOT
PIN: 23-2183-332-00-013
Tax # 01724
Invoice # 468876
10/16/00 -- 8:42:24 AM
Cashier ID: 01
\$ 68.00
Check Purchase- #166

DWR Map No.
N-9

DIV 5
CO 23
WD 45
BA
USE MD

COLORADO DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES

GWS-50INST (12/95)

NEW 35+ ACRE RESIDENTIAL - GENERAL INSTRUCTIONS

There are a variety of uses for ground water in Colorado. This form (GWS-50) is to be used only when applying for a new well that will be used for household use in up to three single family residences, watering of up to one acre of home garden and lawn, and watering of the owner's domestic animals (this is sometimes referred to as "domestic" use), and/or for the watering of livestock on a farm, ranch, range, or pasture. This form is to be used only if the well will be the only well on a tract of land of 35 acres or more.

This form should not be used for the following situations:

HOUSEHOLD USE ONLY - use RESIDENTIAL form GWS-49

REPLACEMENT of a residential or livestock well - use RESIDENTIAL form GWS-49

FEES This Application must be submitted with the required \$60 non-refundable filing fee.
Checks should be payable to the COLORADO DIVISION OF WATER RESOURCES.

Applications are evaluated in chronological order. Please allow approximately six weeks for processing.

APPLICATIONS must be completed clearly, and legibly, in BLACK INK or typed. ALL ITEMS in the application must be completed. Incomplete applications may be returned to the applicant for more information.

THE LOCATION of the well in item 4 must be correctly and accurately described. The county, quarter/quarter, section, township, range, principal meridian, and distance from section lines must be provided.

NOTE: Distances are not necessarily the same distances as the distances from (your) property lines.

For additional assistance in describing the location of your well review the instruction sheet entitled "How To Determine A Well Location" which can be requested from any Colorado Division of Water Resources Office.

A LEGAL DESCRIPTION, survey, or copy of a map showing your lot or parcel of land is required. This description must be legible, and must include a tie to a section line or corner.

If you are unsure of what USE to request, the instruction sheet entitled "Qualifying For A Well Permit", may be of assistance in determining the maximum use for which you may qualify. This can be requested from any Colorado Division of Water Resources office.

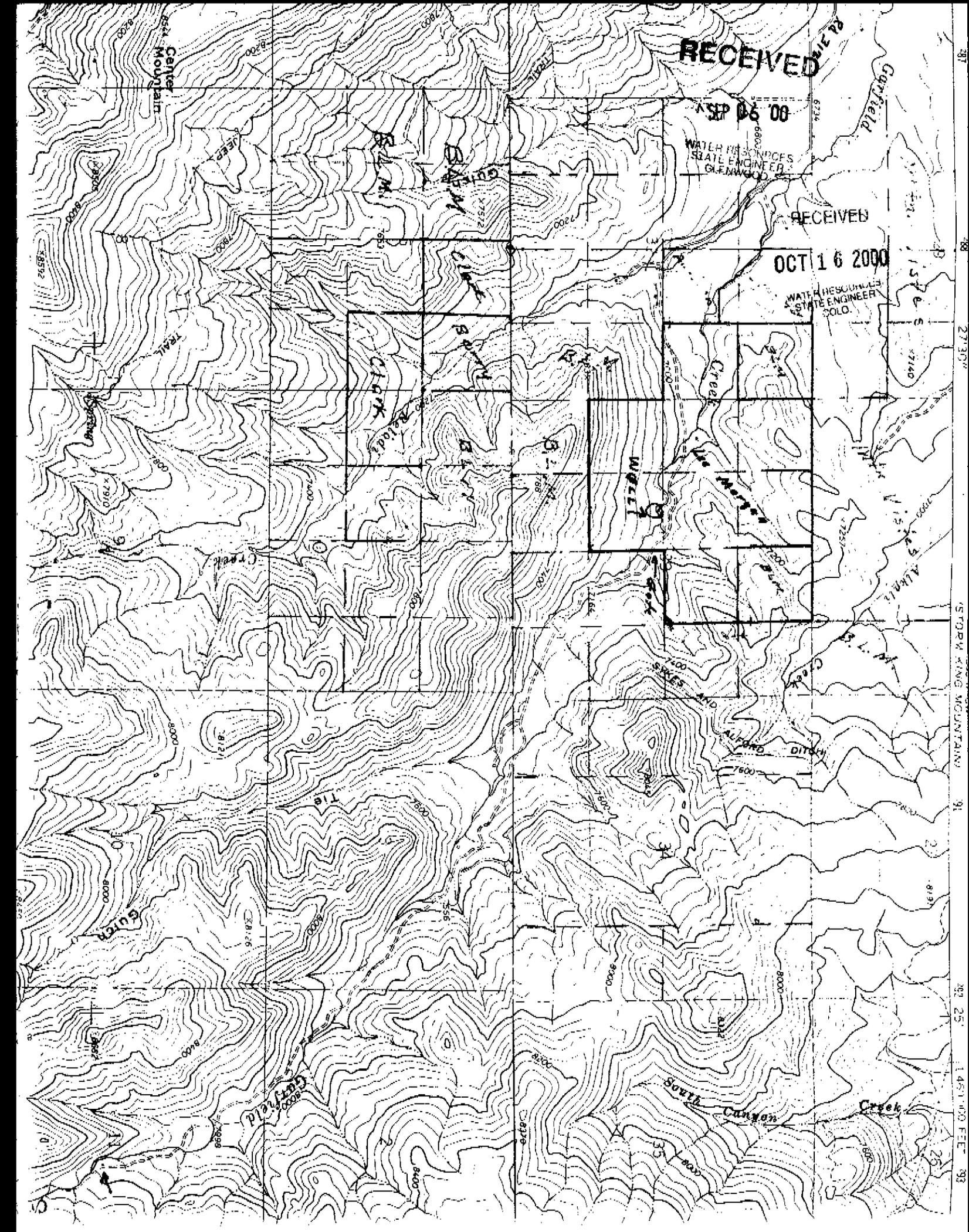
In Colorado the primary criteria for evaluation of availability of permits for residential and livestock water well use is based on injury to other water rights. There are specific exclusions to the injury determination that are based on the tract on which the well is to be located. For applications other than new construction the criteria for evaluation may be based on additional factors such as historic use, previously permitted use, or decreed use.

An ORIGINAL signature must be on each application. The applicant's authorized agent may sign the application, if a letter signed by the applicant is submitted with the application authorizing the individual signing the application to act as agent for the purpose of obtaining a well permit.

DETAILED INSTRUCTIONS ARE AVAILABLE UPON REQUEST

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 Resource 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).

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).



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SEP 06 00

WATER RESOURCES
STATE ENGINEER
COLORADO

RECEIVED

OCT 16 2000

WATER RESOURCES
STATE ENGINEER
COLORADO

Center
Mountain

CLARK'S
RIDGE

WELL
9

DITCH

South
Canyon

Creek

107° 30' W
37° 25' N
1451-420 FEET

WELL CONSTRUCTION AND TEST REPORT
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER

FOR OFFICE USE ONLY

RECEIVED *Rec #*

09500246

MAY 11 2001

WATER RESOURCES
 STATE ENGINEER
 COLO.

APPROVAL # GWS31-91-03

1. WELL PERMIT NUMBER 229106

2. Owner Name(s) : Lee Morgan
 Mailing Address : 1205 Walz Ave.
 City, St. Zip : Glenwood Springs, Co. 81601
 Phone (970) 945-6351

3. WELL LOCATION AS DRILLED: NE 1/4 SW 1/4 Sec. 33 Twp. 06S Range 90W
 DISTANCES FROM SEC. LINES:
 2540 ft. from South Sec. line. and 1950 ft. from West Sec. line. OR
 SUBDIVISION : LOT BLOC FILING(UNIT)
 STREET ADDRESS AT WELL LOCATION :

4. GROUND SURFACE ELEVATION ft. DRILLING METHOD Air Rotary
 DATE COMPLETED 04/18/01 TOTAL DEPTH 175 ft. DEPTH COMPLETED 175 ft.

5. GEOLOGIC LOG :

| Depth | Type of Material (Size, Color, and Type) |
|---------|--|
| 000-015 | Clays, Rocks |
| 015-175 | Wasatch Formation |

| 6. HOLE DIAM. (in) | FROM (ft) | TO (ft) |
|--------------------|-----------|---------|
| 9.0 | 0 | 40 |
| 6.5 | 40 | 175 |

7. PLAIN CASING

| OD (in) | Kind | Wall Size | From (ft) | To (ft) |
|---------|-------|-----------|-----------|---------|
| 7.0 | Steel | 0.240 | -1 | 40 |
| 5.5 | PVC | .250 | 18 | 60 |
| 5.5 | PVC | .250 | 70 | 175 |

PERF. CASING : Screen Slot Size :

| OD (in) | Kind | Wall Size | From (ft) | To (ft) |
|---------|------|-----------|-----------|---------|
| 5.5 | PVC | .250 | 60 | 70 |

WATER LOCATED : 60
 REMARKS :

8. Filter Pack
 Material :
 Size :
 Interval :

9. Packer Placement
 Type :
 Depth :

10. GROUTING RECORD :

| Material | Amount | Density | Interval | Placement |
|----------|--------|---------|----------|-----------|
| cement | 5 sks | 16 gal | 10-40 | poured |

11. DISINFECTION : Type : HTH Amt. Used : oz.

12. WELL TEST DATA : [] Check Box If Test Data is Submitted On Supplemental
 TESTING METHOD : Air Compressor
 Static Level : 19 ft. Date/Time Measured : 4/18/01 Production Rate : 1 gpm
 Pumping Level : Total ft. Date/Time Measured : 4/18/01 Test Length : 2 hrs.
 Remarks :

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) CRS, the making of false statements constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.)

CONTRACTOR : Shelton Drilling Corp. Phone : (970) 927-4182
 Mailing Address : P.O. Box 1059 Basalt, CO 81621 Lic. No. 1095
 Name / Title (Please Type or Signature) Date 05/08/01
 Wayne Shelton / President

ORIGINAL

| | | |
|--|---|--|
| FORM NO. GWS-32 10/94 | PUMP INSTALLATION AND TEST REPORT STATE OF COLORADO, OFFICE OF THE STATE ENGINEER | For Office Use only RECEIVED MAY 14 2001 WATER RESOURCES STATE ENGINEER COLO. |
| 1. WELL PERMIT NUMBER <u>229106</u> | | <i>Rec# 09500246</i> |
| 2. OWNER NAME(S) <u>Lee Morgan</u> Mailing Address <u>1205 Walz Ave.</u> City, St. Zip <u>Glen Spgs Co 81601</u> Phone (970) 945-6351 | | |
| 3. WELL LOCATION AS DRILLED: <u>NE 1/4 SW 1/4, Sec.33 Twp. 6 S Range 90 W 6th</u> DISTANCES FROM SEC. LINES: <u>2540</u> ft. from <u>South</u> Sec. line. and <u>1950</u> ft. from <u>West</u> Sec. line. <small>(north or south) (east or west)</small> SUBDIVISION: _____ LOT _____ BLOCK _____ FILING(UNIT) _____ STREET ADDRESS AT WELL LOCATION: _____ | | |
| 4. PUMP DATA: Type <u>Submersible</u> Installation Completed <u>5/2/01</u> Pump Manufacturer <u>Goulds</u> Pump Model No. <u>5GS05412L</u> Design GPM <u>5</u> at RPM <u>3450</u> , HP <u>1/2</u> , Volts <u>230</u> , Full Load Amps <u>4.6</u> Pump Intake Depth <u>170'</u> Feet, Drop/Column Pipe Size <u>1"</u> Inches, Kind <u>Sch 80 PVC</u> ADDITIONAL INFORMATION FOR PUMPS GREATER THAT 50 GPM: TURBINE DRIVER TYPE: <input type="checkbox"/> Electric <input type="checkbox"/> Engine <input type="checkbox"/> Other _____ Design Head _____ feet, Number of Stages _____, Shaft size _____ inches. | | |
| 5. OTHER EQUIPMENT: Airline Installed <input type="checkbox"/> Yes <input type="checkbox"/> No, Orifice Depth ft. _____ Monitor Tube Installed <input type="checkbox"/> Yes <input type="checkbox"/> No, Depth ft. _____ Flow Meter Mfg. _____ Meter Serial No. _____ Meter Readout <input type="checkbox"/> Gallons, <input type="checkbox"/> Thousand Gallons, <input type="checkbox"/> Acre feet, <input type="checkbox"/> Beginning Reading _____ | | |
| 6. TEST DATA: <input type="checkbox"/> Check box if Test data is submitted on Supplemental Form. Date <u>5/02/01</u> Total Well Depth <u>175'</u> Time <u>2 HR</u> Static Level <u>12'</u> Rate (GPM) <u>2.2</u> Date Measured <u>5/02/01</u> Pumping Lvl. <u>165'</u> | | |
| 7. DISINFECTION: Type <u>Chlorox</u> Amt. Used <u>1 Cup</u> | | |
| 8. Water Quality analysis available. <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| 9. Remarks _____ _____ _____ _____ | | |
| 10. 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 <u>J & M Pump Co.</u> Phone <u>(970)945-6159</u> Lic. No. <u>1196</u> Mailing Address <u>8611 Co Rd 117 Glen Spgs Co 81601</u> | | |
| Name/Title (Please type or print) <u>Richard A. Holub Owner</u> | Signature <i>Richard A Holub</i> | Date <u>5/07/01</u> |