

ROY ROMER
Governor



JERIS A. DANIELSON
State Engineer



OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

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

September 18, 1989

MEMORANDUM

TO: Ed DiMatteo, COGWCC
FROM: J. Romero, CDWR
SUBJECT: Apache Canyon 11-7 Injection Well
Location: NE1/4, NW1/4, Section 11, T34S, R68W, Las Animas County

COLO. OIL & GAS CONS. COMM.

SEP 19 1989

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Known or suspected aquifers to be penetrated are surficial deposits, the Poison Canyon, and Raton and Vermejo Formations, and the Trinidad Sandstone. The aquifer characteristics of the sandstone-limestone (?) at a depth of 3400 feet on the C.F.&I. #2 log are unknown but its depth probably precludes aquifer use.

The surficial deposits and Poison Canyon Formations yield fresh water throughout their entire thickness. The Raton Formation and Trinidad Sandstone yield water to wells up to 2000 feet deep along the eastern side of the Raton Basin (the Trinidad Sandstone is equivalent to the Fox Hills Sandstone of the Denver Basin). The Vermejo Formation is known to contain coal beds; it might or might not yield fresh water to wells.

Using the log of C.F.&I. #2 as a guide, note that the ground elevation is approximately the same as the proposed well. If this is true, there might not be a need for 2956 feet of intermediate casing; the base of the Trinidad Sandstone is at 2460 feet on the C.F.&I. log. In addition, I suggest you require the operator to close any cement gap between the base of the surface casing and a calculated cement top of about 600 feet for the intermediate casing (using Pozmix A, 2% bentonite, 25% Portland cement, and 2510 feet for the base of the secondary casing). The cement calculation is based on assumptions on my part.

The proposed injection well is near small drainages tributary to the Purgatoire River. There are no registered water wells within one-half mile of the proposed well.

If you have any questions, please give me a call.

JCR:c1f/5078I

Enclosures

cc: Division 2 Engineer

COLORADO OIL AND GAS CONSERVATION COMMISSION

1580 Logan St., Suite 380
 Denver, Colorado 80203

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SEP 11 '89

WATER RESOURCES
 STATE ENGINEER
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MEMO

September 8, 1989

To: Mr. John Romero
 Division of Water Resources

From: Mr. Ed DiMatteo, Underground Injection Control Program

Subject: Need for Hydrologic Information

The Oil and Gas Conservation Commission has received an application for a water injection well to be located;

| | | | |
|--------------------|---------|----------|-------|
| qtr/qtr | Section | Township | Range |
| NE NW | 11 | 34 S | 68 W |
| Las Animas County. | | | |

- 1) Well Name: Apache Canyon 11-7 Field: Wildcat
- 2) Injection Zone(s): Dakota, Purgatoire, Entrada, Dockum
- 3) Depth of Injection Interval: 6215' to 6865'
- 4) Proposed Injection Pressure: 1500 psig
- 5) Frac Gradient or Pressure (BHP): not determined at this time
- 6) Volumes of Fluid to be Injected: 1100 - 11,000 bbl/day
- 7) TDS of Injection Zone Fluid: not determined at this time (mg/l)
- 8) TDS of Fluid to be Injected: not determined at this time (mg/l)

9) Well Construction Data

*** Reentry, logs from nearby well

| | casing size | hole size | depth | amt cement |
|---------------------|-------------|-----------|--------|------------|
| Surface casing | 16 | 20 | 100' | 246 sks |
| Intermediate casing | 10 3/4 | 12 1/4 | 2,956' | 250 sks |
| Longstring casing | 5 1/2 | 8 3/4 | 7,400' | 500 sks |

Please furnish the Commission the name and depth of any aquifer in the area that is a known or potential fresh water strata. We would also like a list of the water wells within one half mile of this location. Any other information with regard to distance to streams, ditches or outcrops would be very helpful.

Thank you

BEST IMAGE
AVAILABLE

| FILE CONTROL | OWNER NAME/S | STREET ADDRESS | CITY | ZIP | ST |
|--------------|---------------------|----------------|-------|-------|----|
| 1-62-06598 | TERRY GRAZING ASSOC | C/O JIM DAVIS | EATON | 08015 | CO |
| 1-62-06599 | TERRY GRAZING ASSOC | C/O JIM DAVIS | EATON | 08015 | CO |
| 1-62-06600 | TERRY GRAZING ASSOC | C/O JIM DAVIS | EATON | 08015 | CO |
| 1-62-06601 | INDUSTRIAL | PIERCE LI | EATON | 08015 | CO |
| 1-62-06602 | HENRY, C. W. | RT. 1 | CARR | 08015 | CO |
| 1-62-06603 | ARMED. SERV | 01005, 0500W | CARR | 08015 | CO |
| 1-62-06604 | LEONARD, ROBERT | 29105, 0250E | CARR | 08015 | CO |
| | | 29105, 0210W | CARR | 08015 | CO |

DATE OF UPDATE IS 08-23-88

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164E-R1, DIVISION OF WATER RESOURCES, GROUND WATER SECTION, MASTER EXTRACT LIST

FULL MASTER LIST BY LOCATION

| FILE CONTROL | OWNER NAME/S | STREET ADDRESS | CITY | ZIP | ST |
|--------------|------------------------------------|---------------------------------|------------|-------|----|
| 1-62-06595 | TERRY GRAZING ASSOC | C/O JIM DAVIS | EATON | 08015 | CO |
| 1-62-06596 | REINHEIMER G B | BOX 47 | CARR | 08015 | CO |
| 1-62-067317 | THOMAS, BERT | 1915N, 2390W | CARR | 08015 | CO |
| 1-62-075739 | HENTENARDT, B. U. | 2518S, 2520W | ALAT | 08015 | CO |
| 1-62-077386 | LWISER, GUY | 1815S, 2145W | ALAT | 08015 | CO |
| 1-62-078323 | RODRE, MURRY H | P.O. BOX 425 | LAPORTE | 08035 | CO |
| 1-62-078834 | DEPORTER, ROSS | 2410N, 2360W | CARR | 08015 | CO |
| 1-62-093419 | MILLER, ANITA MAY JACKSON, LEON | 0138N, 1095E RT. 2, BOX 201A | GREYBERRY | 82001 | WV |
| 1-62-129212 | EATON BANK | 3912 SNYDER AVE 100 OAK ST | GREYBERRY | 82001 | WV |
| 1-62-066536 | HEADON SPRINGS ASSOC | 0750S, 0930W | EATON | 08015 | CO |
| 1-62-133789 | LEHR, JUNE | 100 OAK ST | EATON | 08015 | CO |
| 1-62-062094 | DISEL, JUNIOR U. | 3254 WELD CO. RD. 20 | LEWISPORT | 08051 | CO |
| 1-62-066397 | TERRY GRAZING ASSOC | 1300S, 1300W | LEWISPORT | 08051 | CO |
| 1-62-142916 | ROLERS, U. R. | 0050S, 0075W | EATON | 08015 | CO |
| 1-62-066396 | TERRY GRAZING ASSOC | C/O JIM DAVIS | EATON | 08015 | CO |
| 2-36-018131 | C F & I CORP | 4218 E. PERSHING | PIERCE | 08015 | CO |
| 2-36-016343H | COLORADO FUEL & OIL CO | 1275N, 0425W | PIERCE | 08015 | CO |
| 2-36-018608 | BANNOU, STANLEY S. JR. | SE SW 2 | PIERCE | 08015 | CO |
| 2-36-022720F | MAITE, RYRTLE A | P O BOX 316 | PIERCE | 08015 | CO |
| 2-36-021065F | RECON, JOHN M. | P O BOX 1920 | DEWEER | 08015 | CO |
| 2-36-021066F | RECON, JOHN M. | BOX 45, STAR RT. 1 | WESTON | 08091 | CO |
| 2-36-021067F | RECON, JOHN M. | ROUTE 1 BOX 315 | NELLINGTON | 08049 | CO |
| 2-36-021068F | RECON, JOHN M. | 0860N, 0550W | HOLISTON | 77001 | TX |
| | | 2960 LAZY LANE | HOLISTON | 77001 | TX |
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FULL MASTER LIST BY LOCATION

| FILE CONTROL | OWNER NAME/S | STREET ADDRESS | CITY | ZIP | ST |
|--------------|------------------------|----------------|----------|-------|----|
| 2-36-021069F | RECON, JOHN M. | 2960 LAZY LANE | HOLISTON | 77001 | TX |
| 2-36-021070F | COLORADO FUEL & OIL CO | P O BOX 1920 | DEWEER | 08015 | CO |
| 2-36-021071F | BERZ, D T | BOX 97 | WESTON | 08091 | CO |
| 2-36-021072F | CHAVEZ, GERRIE | 0160S, 0660W | WESTON | 08091 | CO |
| 2-36-021073F | C F & I CORP | BOX 97 | WESTON | 08091 | CO |
| 2-36-021074F | COLORADO FUEL & OIL CO | BOX 97 | WESTON | 08091 | CO |
| 2-36-021075F | COLORADO FUEL & OIL CO | BOX 97 | WESTON | 08091 | CO |
| 2-36-021076F | COLORADO FUEL & OIL CO | BOX 97 | WESTON | 08091 | CO |
| 2-36-021077F | COLORADO FUEL & OIL CO | BOX 97 | WESTON | 08091 | CO |
| 2-36-021078F | COLORADO FUEL & OIL CO | BOX 97 | WESTON | 08091 | CO |