

WATER SUPPLY INFORMATION SUMMARY

Section 30-28-133.(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence that a water supply that is sufficient in terms of quantity, quality and dependability will be available to ensure an adequate supply of water.

1. NAME OF DEVELOPMENT AS PROPOSED
DAVIS RANCH SUBDIVISION FILING NO. 2

2. LAND USE ACTION FINAL PLAT

3. NAME OF EXISTING PARCEL AS RECORDED NOT RECORDED

SUBDIVISION _____ FILING _____ BLOCK _____ LOT _____

4. TOTAL ACREAGE 78.165 5. NUMBER OF LOTS PROPOSED 14 PLAT MAP ENCLOSED YES

6. PARCEL HISTORY - Please attach copies of deeds, plats or other evidence or documentation.

A. Was parcel recorded with county prior to June 1, 1972? YES NO
 B. Has the parcel ever been part of a division of land action since June 1, 1972? YES NO
 If yes, describe the previous action PRELIMINARY PLAN APPROVED 9-11-03;

7. LOCATION OF PARCEL - Include a map delineating the project area and tie to a section corner.

1/4 OF 1/4 SECTION 3 TOWNSHIP 14 N S RANGE 64 E W
 PRINCIPAL MERIDIAN: 6TH N.M. UTE COSTILLA

8. PLAT - Location of all wells on property must be plotted and permit numbers provided. SEE ATTACHED LOCATION MAP
 Surveyors plat Yes No If not, scaled hand drawn sketch Yes No

9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Feet per Year	10. WATER SUPPLY SOURCE
<p><u>PER LOT - RESIDENTIAL USE</u></p> <p>HOUSEHOLD USE _____ GPD <u>0.27</u> AF</p> <p>COMMERCIAL USE _____ GPD _____ AF</p> <p>IRRIGATION _____ GPD _____ AF</p> <p>STOCK WATERING <u>2 Horses</u> _____ GPD <u>0.03</u> AF</p> <p><u>4300 sq. ft.</u></p> <p>OTHER <u>LAWN WATERING</u> _____ GPD <u>0.25</u> AF</p> <p>TOTAL _____ GPD <u>0.55</u> AF</p> <p><u>14 LOTS X 0.55 = 7.70 AF/YR</u></p>	<p><input checked="" type="checkbox"/> EXISTING WELLS <input type="checkbox"/> DEVELOPED SPRING</p> <p>WELL PERMIT NUMBERS <u>51398-F</u></p> <hr/> <p><input type="checkbox"/> MUNICIPAL <input type="checkbox"/> ASSOCIATION <input type="checkbox"/> COMPANY <input type="checkbox"/> DISTRICT</p> <p>NAME _____</p> <p>LETTER OF COMMITMENT FOR SERVICE <input type="checkbox"/> YES <input type="checkbox"/> NO</p>
	<p><input type="checkbox"/> NEW WELLS -</p> <p>PROPOSED ADDRESSES - (CHECK ONE)</p> <p><input type="checkbox"/> ALLIANTAL <input checked="" type="checkbox"/> UPPER ARAPAHOE <input type="checkbox"/> UPPER DAWSON <input type="checkbox"/> LOWER ARAPAHOE <input type="checkbox"/> LOWER DAWSON <input type="checkbox"/> LARAMIE FOX HILLS <input type="checkbox"/> DENVER <input type="checkbox"/> SASKOTA <input type="checkbox"/> OTHER _____</p>
	<p>WATER COURT DECREE CASE NO.:</p> <p>① <u>DET. WATER RIGHT NO. 4-RD DATED FEB 2, 1999</u></p> <p>② <u>CHANGE TO DET. 4-RD DATED JUNE 16, 2003</u></p>

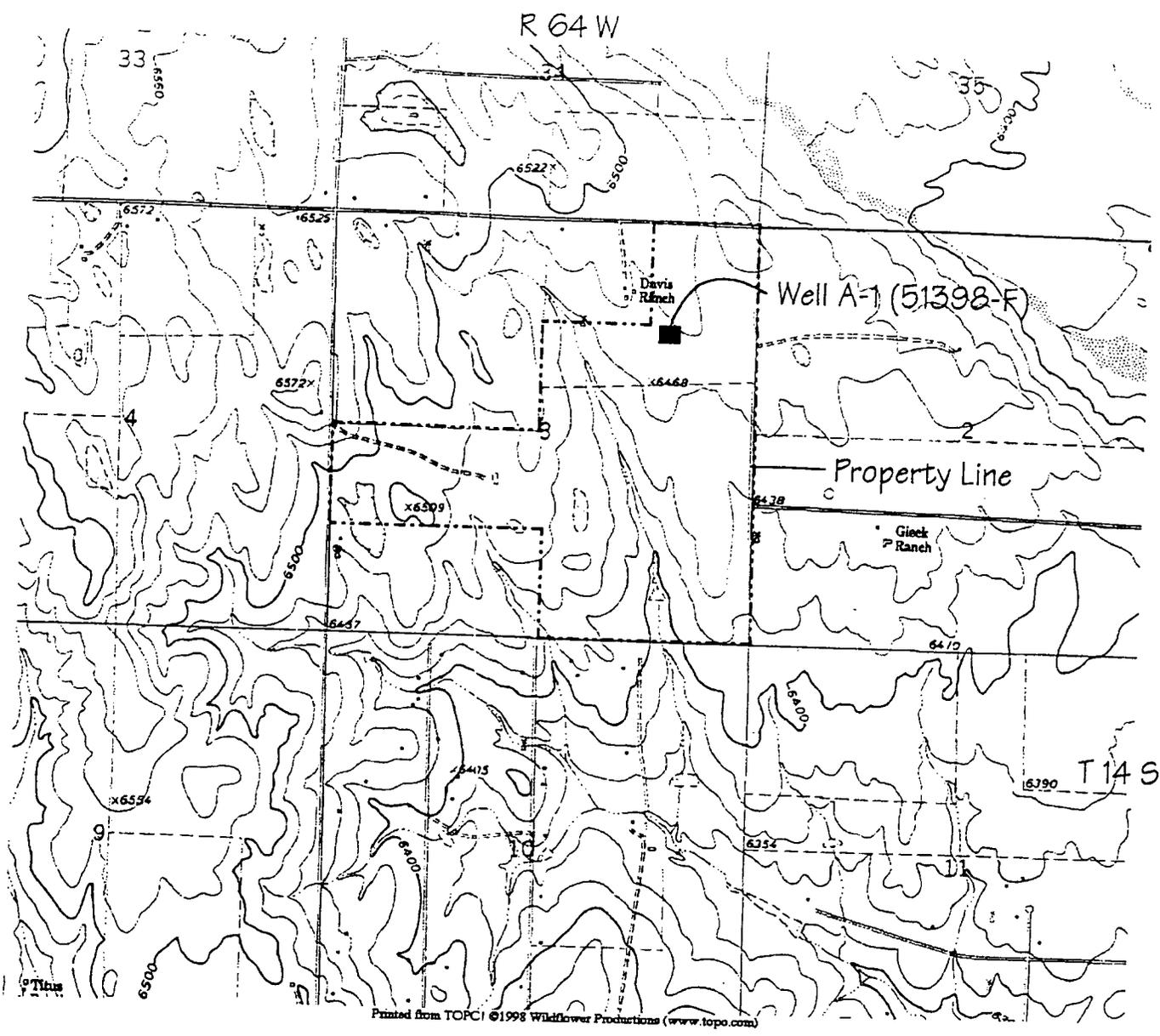
11. ENGINEER'S WATER SUPPLY REPORT YES NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed)
SEE WATER REPORT BY W.M. CURTIS WELLS & CO AND RELATED MATERIALS

12. TYPE OF SEWAGE DISPOSAL SYSTEM

SEPTIC TANK/LEACH FIELD CENTRAL SYSTEM - DISTRICT NAME _____

LAGOON VAULT - LOCATION SEWAGE HAULED TO _____

ENGINEERED SYSTEM (Attach a copy of engineering design) OTHER _____



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Scale 1" = 2000'

LOCATION MAP

Wm. Curtis Wells & Co.
consulting ground water geologists

Figure 1



Wm. CURTIS WELLS & CO. / *consulting geologists*
the ranch office commons. bldg 3. suite 102 / 2010 west 120th avenue
denver. colorado 80234 / telephone (303) 466-3801 / fax 465-5859

August 9, 2001
Revised: May 30, 2002

Mr. Karl Andrews
102 East Pikes Peak, Suite 200
Colorado Springs, CO 80903

Re: Ground Water Investigation, Davis Ranch, El Paso County, Colorado
Job No. 5124

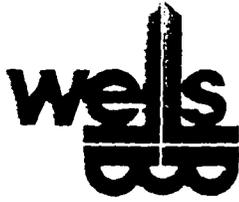
Dear Karl:

At your request I have prepared this preliminary ground water report for the 360-acre Davis Ranch property. This irregular shaped parcel spans the Northeast Quarter of the Northeast Quarter, the South One-Half of the Northeast Quarter, the Southeast Quarter and the North One-Half of the Southwest Quarter of Section 3, Township 14 South, Range 64 West. I understand this property may be developed for about 63 single family homes on 5 acre sites. Individual wells will serve this proposed community and non- evaporative septic systems will be the method of wastewater disposal.

For this investigation I have reviewed my files and those of the State Engineer for geologic, ground water and well information in this area. Subsurface geohydrologic information was obtained from my geophysical log file and the State Engineer's aquifer computer data base. From this investigation, I conclude that (1) a sufficient supply of ground water can be appropriated from the Arapahoe aquifer to meet the 300-year water demand of this planned development and (2) the quality of the ground water in this aquifer should be adequate for domestic purposes.

GENERAL COMMENTS

The subject property, at a surface elevation of 6,500 feet above sea level, is located a mile north of Highway 94 along Curtis Road. The parcel, as shown on the attached Figure-1, slopes to the southeast and is drained by tributaries of the West Fork of Black Squirrel Creek.

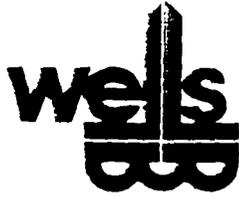


The property is underlain by three of the four Denver Basin aquifers. In descending stratigraphic order these aquifers are the Denver, Arapahoe and Laramie Fox Hills formations. The base of these respective aquifers should be 370, 900 and 1,500 feet below the ground surface. All of the aquifers are known to produce ground water and typically in this region wells should yield 15, 50 and 120 gallons per minute from the three respective aquifers. The existing Arapahoe well, No. 51398-F was originally tested at a rate of 80 gallons per minute.

Ground water availability in each aquifer is computed by multiplying the area of the property by the formation saturated sand thickness, thence by specific yield (drainable porosity). Based on published aquifer information from the Colorado Division of Water Resources, I list on the table below estimates of ground water stored beneath this subject parcel.

Aquifer		Sand Thickness (ft)	Ground Water Storage (af)
Denver	NNT	105	6400
Arapahoe	NNT	170	10400
Laramie Fox Hills	NT	210	11300
Total			28100

The quality of the water produced from Arapahoe wells should be adequate for drinking purposes. Typically, ground water from this aquifer contains iron at or slightly higher concentrations than the drinking water standard. Until water quality testing can be accomplished, you should contemplate iron treatment of the water supply. **Prior to final platting the project, the County will require a water quality analysis from the existing well.**



WATER SUPPLY DEVELOPMENT

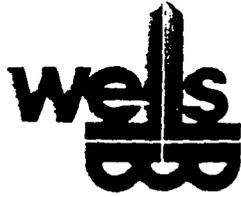
All of the above described aquifers receive very little surface water recharge, hence the water resource has been identified as "non-renewable". The El Paso County Commissioners, in the late 1980's, declared that developments using this water must demonstrate a 300-year supply in order to establish water supply sufficiency.

For this proposed development I estimate each homeowner would use 0.55 acre feet per year. The in-house use would be about 0.27 acre feet per year and the remaining water would be sufficient for the irrigation of about 4,300 square feet of lawn or garden and the watering of two horses. The 63 homes, therefore, would need about 34.7 acre feet per year or 10,400 acre feet over 300 years. The 300-year supply, equals the Arapahoe aquifer ground water storage, thus the water supply should be sufficient for subdivision purposes.

The Arapahoe ground water can be appropriated from either the existing well No. 51398-F or any number of additional wells according to the Determination of Water Rights, 4-BD, issued by the Colorado Ground Water Commission on February 26, 1999. A copy of the Determination is attached. The Determination approved the use of the Arapahoe aquifer for industrial, commercial, irrigation and a central water supply system (domestic) provided four percent (1.4 acre feet per year) of the water is returned to the upper most aquifer. This requirement is imposed since the Arapahoe aquifer at this location is considered non-tributary (NNT). For this development septic system return flows should approximate 15 acre feet per year, thus this Determination requirement should be easily fulfilled.

I understand that you have applied to correct the Determination language to read residential supply rather than "central water supply system". This application was submitted to the Commission in April in part to re-permit the existing well for domestic use and thus this structure could be used as one of the 63 wells on this property.

Normally, a 900-foot deep Arapahoe domestic well should cost about \$12 per foot or \$10,800. Pumping equipment should add \$3,000.



RECOMMENDATIONS

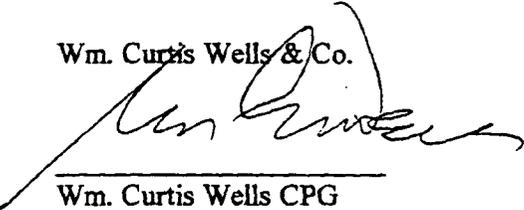
- (1) In developing this property the plat map should illustrate specific on-lot well sites so that all of the proposed Arapahoe wells can be evenly spaced.
- (2) Before final platting, the existing Arapahoe well should be tested to obtain water samples that can be chemically analyzed to verify water supply sufficiency in terms of water quality.

Professional judgements have been expressed in this report. They are based on my understanding of the project and my experience with the aquifers in this area. Well drilling and testing will be necessary to verify my preliminary opinions on well yield and water quality.

I trust this information satisfies your immediate needs. If you have questions, please call.

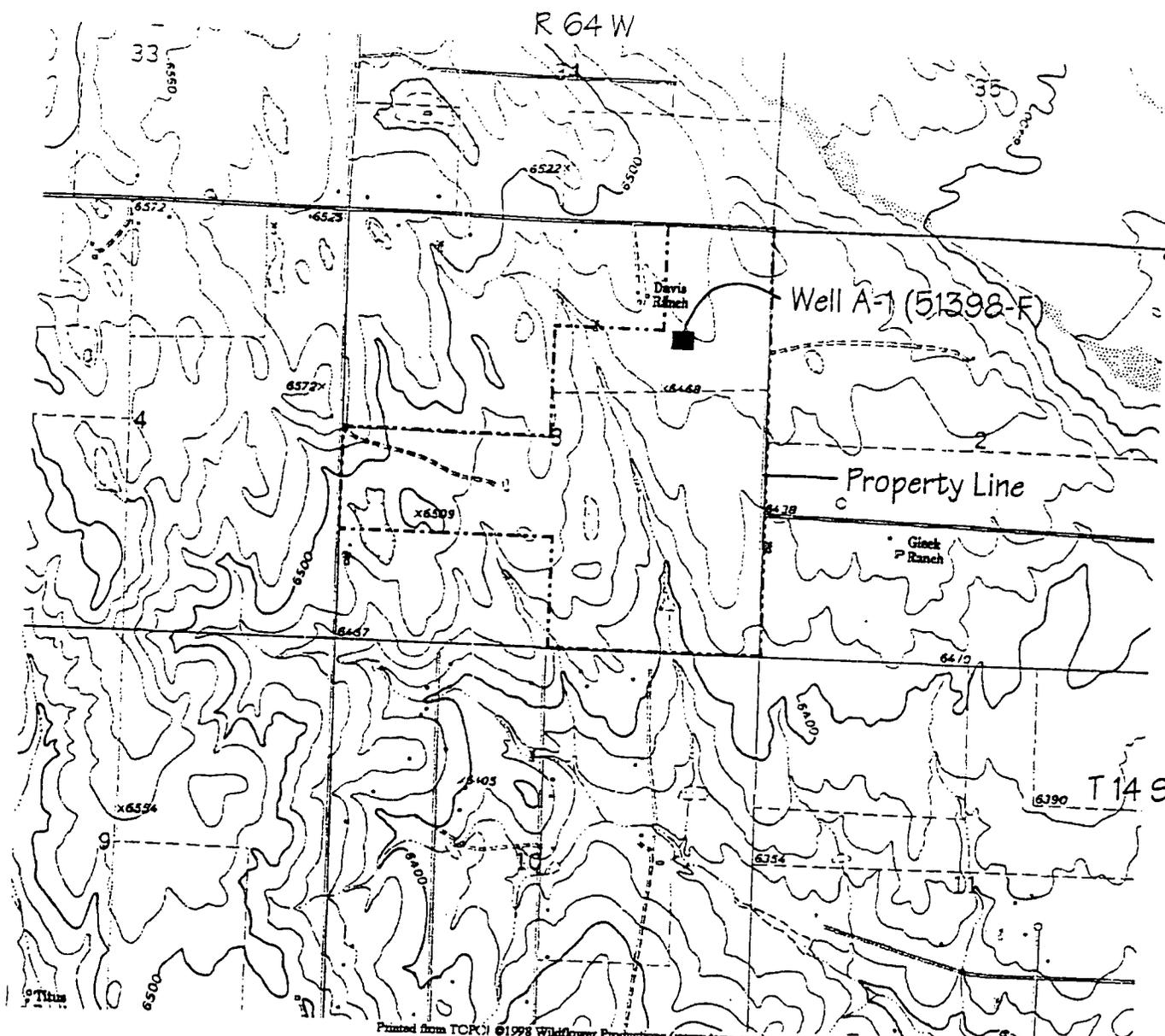
Very truly yours,

Wm. Curtis Wells & Co.



Wm. Curtis Wells CPG
Consulting Ground Water Geologist

(2-copies sent)
cad master



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LOCATION MAP

Wm. Curtis Wells & Co.
consulting ground water geologists

Figure 1



Scale 1" = 2000'

October 1, 2003

SUBJECT: WATER RESOURCES SUMMARY AND UPDATE FOR DAVIS RANCH
Section 3, T.14 S., R.64 W. of the 6th P.M., El Paso County, CO

PRELIMINARY PLAN: (SP-02-015) Approved Sept. 11, 2003, by B.O.C.C.
for 63-lot residential subdivision;

1. Applicable Decreed Water Rights Available:

a. Determination of Water Right No. 4-BD:

- (1) Arapahoe aquifer;
- (2) Date: February 2, 1999;
- (3) Approved withdrawal: 104 AF/annum;
- (4) Beneficial uses: industrial, commercial, irrigation, and central water supply system;

b. Change of Water Right to change the allowed beneficial use of ground water for Determination of Water Right No. 4-BD;

- (1) Arapahoe aquifer;
- (2) Date of Change of Water Right: June 16, 2003;
- (3) Approved withdrawal: 104 AF/annum (same);
- (4) Beneficial uses: Changed to: industrial, commercial, residential, stock watering and replacement supply. A central water supply system may deliver the water on the 360 acre described property for the above uses.

2. Water Rights Ownership:

Per Warranty Deed dated April 12, 2002, and recorded May 1, 2002, at R.N. 202070244, El Paso County, CO, Determination of Water Right No. 4-BD and No. 111-BD are owned by County Line Estates LLC and Case Holdings LLC.

3. Annual water Requirement for Davis Ranch Development at full development:

63 lots (x) 0.55 AF per annum per lot = 34.65 AF per annum;
(0.27 AF for household, 0.25 AF for 4,300 Sq.Ft. of lawn watering,
and 0.03 AF for watering 2 horses)

This requirement of 34.65 AF per annum is the amount of annual water supply available from the Arapahoe aquifer per Determination of Water Right No. 4-BD in satisfaction of El Paso County's 300 year water supply requirement.

4. Annual water requirement for each Davis Ranch lot included in individual final plats processed at the County:

Each lot will be entitled to a deed to 0.55 AF per annum in the Arapahoe aquifer for individual Arapahoe wells for residential use.

5. Attachments to this summary:

- a. Ground water investigation report, Wm. Curtis Wells and Co., revised May 30, 2002;
- b. Determination of Water Right No. 4-BD, dated Feb. 2, 1999;
- c. Change of Beneficial Use of Water Right 4-BD dated June 16, 2003;
- d. Letter from Office of State Engineer dated July 24, 2002;
- e. Special Warranty Deed regarding ownership of water rights;