

**Department of Local Affairs  
Division of Property Taxation**

**A Report to the General Assembly**

**THE ESTIMATED RESIDENTIAL ASSESSMENT RATE FOR  
2001 – 2002**

**Pursuant to 39-1-104.2(6) C.R.S.**

**January 10, 2001**

**SUMMARY**

In a reappraisal year, Article X, section 3(1)(b) of the Colorado Constitution and 39-1-104.2(5)(a), C.R.S., requires an adjustment in the residential assessment rate in order to maintain a balance between residential and all other property. The General Assembly must adjust the residential assessment rate to ensure that the percentage of residential real property assessed value, when compared to the assessed value of all property, remains essentially the same as the preceding year. The adjustment is intended to stabilize residential real property's share of the property tax base. Section 39-1-104.2(5)(c), C.R.S., requires the Property Tax Administrator to complete a documented study that estimates the residential assessment rate for 2001-2002. Three major calculations are required:

1. Using the total actual 1999 assessed value for nonresidential property, calculate what the total 1999 residential real property value should have been to exactly achieve the 1999 residential real property target percentage of 46.49 percent. Then, adjust the 46.49 percent target percentage to account for 1999 and 2000 net changes in new construction and the production volumes of producing metallic mines, producing coal mines, oil and gas wells, and earth and stone operations. The 2001 residential real property target percentage is 46.61 percent.
2. Estimate 2001 values and determine residential real property's share of the tax base assuming the residential assessment rate remains at 9.74 percent. The estimated 2001 tax base share for residential real property at an assessment rate of 9.74 percent is 47.62 percent.
3. Calculate the estimated residential assessment rate necessary to ensure that residential real property's share of the 2001 tax base is 46.61 percent of the total assessed value of all taxable property. The residential assessment rate for the 2001 change in level of value is calculated to be 9.35 percent.

In prior years, the State Board of Equalization (state board) had the authority to adjust the residential rate during its fall hearings if the valuations actually implemented by the counties showed that the estimated residential rate was incorrect. The statute giving the state board that authority, 39-1-104.2(7), C.R.S., was repealed in 1993. Therefore, all counties will be contacted during the month of April to determine if the counties' projections of 2001 valuations prepared during 2000 are similar to the actual assigned values. Should the revisions result in a substantial change in the estimated residential assessment rate for 2001-2002, the General Assembly will be informed prior to the end of April so the proposed legislation can be changed.

The following table lists the estimated changes in assessed value by class of property between 2000 and 2001 with a 2001 residential assessment rate of 9.74 percent.

**COMPARISON OF 2000 AND ESTIMATED 2001 ASSESSED VALUES BY CLASS**

<b>Class of Property</b>	<b>2000 Assessed</b>	<b>Estimated 2001</b>	<b>% Change</b>	<b>% of Total</b>
VACANT LAND	3,059,845,599	3,851,487,218	25.9%	6.6%
RESIDENTIAL REAL*	22,730,088,702	27,759,533,324	22.1%	47.6%
COMMERCIAL**	14,547,479,629	17,160,473,190	18.0%	29.4%
INDUSTRIAL	2,509,594,758	3,089,308,173	23.1%	5.3%
AGRICULTURAL*	815,751,047	809,690,649	-0.7%	1.4%
NAT RESOURCES	255,679,107	272,325,203	6.5%	0.5%
PRODUCING MINES	99,814,740	97,184,718	-2.6%	0.2%
OIL & GAS	1,486,081,462	1,828,771,847	23.1%	3.1%
STATE ASSESSED	3,298,108,624	3,423,436,752	3.8%	5.9%
<b>TOTAL</b>	<b>48,802,443,668</b>	<b>58,292,211,073</b>	<b>19.4%</b>	<b>100.0%</b>

\* Residential property includes agricultural residences and all mobile homes.

\*\* Commercial property includes residential personal property.

**HISTORY OF THE RESIDENTIAL ASSESSMENT RATE**

In 1982 the electorate passed Constitutional Amendment Number One, the residential assessment rate portion of which is referred to as the "Gallagher Amendment." The Amendment to Article X, Section 3 of the Colorado Constitution caused substantial changes in Colorado property tax laws.

The intent of Gallagher was to stabilize residential real property's share of the property tax base. Residential real property's share of total assessed value had increased from 29 percent in 1958 to 44 percent in 1982. By allowing the residential assessment rate to "float," residential real property would not continue to bear an ever-increasing share of the property tax burden. The floating rate would increase if residential real property's share of total taxable assessed value appreciably declined below 44.60 percent. Similarly, the rate would decrease if residential real property's share of total taxable assessed value appreciably exceeded 44.60 percent.

The 44.60 percent, which is now referred to as the "residential target percentage," was calculated based upon residential real property's share of total assessed value for 1986. The General Assembly provided for changes in the target percentage based upon growth or decline in various classes of property. The target percentage is adjusted during the year preceding each change in the level of value, i.e. during even-numbered years.

The adjustment begins by first calculating what the total assessed value of residential real property would have been, at the prior level of value, had the residential assessment rate been estimated such that the exact share of the tax base indicated by the prior residential target percentage was achieved.

Then, the assessed value attributable to residential new construction, reported during the two years prior to the year of change in level of value is added to the calculated residential real property total.

Similarly, the assessed value of new construction in all property classes, reported during the same two years, is added to the total of all other property assessed value as of the last level of value. Then, the net changes in the production volumes of producing metallic mines, producing coal mines, oil and gas wells, and earth and stone operations are expressed as assessed values and added to the all other property total. Finally, the adjusted residential real property total is divided by the total of the above-assessed values to arrive at a new residential target percentage.

## **PRIOR TO AND INCLUDING 1982**

Prior to and including 1982 (the 1973 level of value), most property was assessed at 30 percent of actual value. The amendment initially set the residential assessment rate for 1983-1986 (the 1977 level of value) at 29 percent for most property and 21 percent for residential real property.

## **1987 AND 1988**

In 1986 the state board requested that the Division of Property Taxation (Division) estimate the residential assessment rate for 1987 (the 1984 level of value). In 1988, the General Assembly enacted 39-1-104.2(6), C.R.S., which required that the Division prepare a documented residential assessment rate study for changes in the level of value in 1989 (the 1988 level of value), 1991 (the 1990 level of value), and 1993 (the 1992 level of value). This subsection was later amended to include 1995 (the 1994

level of value), 1997 (the 1996 level of value), and for each subsequent year of reappraisal.

Using the methodologies described in the next section of this report, the residential assessment rate has been estimated seven times. In 1986, using a residential target percentage of 44.39 percent, the Division estimated the rate for 1987-1992 to be 16.74 percent (17 percent rounded). The General Assembly chose to enact a residential assessment rate of 18 percent for 1987. In 1988, the General Assembly reconsidered this decision and enacted a residential assessment rate of 16 percent for 1988. A review of historical records, including actual rather than estimated assessed values and adjustments of County Boards of Equalization indicated the correct rate to be 15.30 percent (15 percent rounded) for 1987 and 1988.

### **1989 AND 1990**

In 1988, using a residential target percentage of 44.51 percent, the Division estimated the rate for 1989-1990 to be 15.04 percent (15 percent rounded). The 44.51 percent residential target percentage and the 15 percent residential assessment rate were enacted into law in 1989, 39-1-104.2(3)(b), C.R.S. Verification of the estimate using final 1989 assessed values submitted by the county assessors initially indicated a residential assessment rate of 14.42 percent (14 percent rounded). Pursuant to the requirements of 39-1-104.2(7), C.R.S., the state board changed the rate to 14 percent. However, after the counties' resubmission of assessed values to the Division using the 14 percent residential assessment rate, the Division discovered that Denver County had made a \$150 million keypunch error on its original submission. Correcting for the error resulted in a verified rate of 14.53 percent (15 percent rounded), and also resulted in the assessors having to submit values a third time.

### **1991 AND 1992**

In 1990, using a residential target percentage of 44.57 percent, the Division estimated a residential assessment rate for 1991 – 1992 of 14.34 percent (14 percent rounded). However, during the 1991 Legislative Session, the rounding convention was changed to the nearest one-hundredth of one percent. The target percentage of 44.57 percent and the estimated residential assessment rate of 14.34 percent (rounded) were enacted into law in 1991, 39-1-104.2(3)(c), C.R.S. Verification of this estimate using final 1991 assessed values submitted by the assessors indicated a residential assessment rate of 13.78 percent. This rate was outside the one-half percent tolerance permitted by 39-1-104.2(7)(b), C.R.S., by six one-hundredths of one percent.

### **Pitkin, Denver, and Arapahoe Counties**

Comparison of the estimated 1991 assessed values with the final 1991 assessed values submitted by the county assessors indicated the error in the rate was largely attributable to three counties: Arapahoe, Denver and Pitkin.

Pitkin County over-estimated the increase in assessed values in the commercial property class.

Denver County over-estimated commercial values primarily as a result of a subsequent decision to conform the valuations of all hotel property surrounding Stapleton Airport to a recent Board of Assessment Appeals' (BAA) decision. The BAA ordered that the capitalization rate be increased and that the future net income estimates be decreased for a petitioner's hotel property near Stapleton Airport. These adjustments were required, in the opinion of the BAA, to account for the greater risk and probable reduction in income associated with the closure of Stapleton after Denver International Airport opened. Rather than lose similar cases one at a time, Denver County decided to lower the valuations of all similar properties.

Concerning Arapahoe County, the Division discovered an unexplained 38 percent decline in vacant land values between 1990 and 1991. Upon further research, procedural irregularities in the application of present worth valuation to vacant land parcels were discovered. The Assessment Auditor's contract required that vacant land values be statistically analyzed only to the adjusted selling price of vacant land property rather than to the final vacant land present worth values. However, upon review of the present worth procedures applied by Arapahoe County, the Assessment Auditor recommended reappraisal of Arapahoe County's vacant land class. Had Arapahoe County not changed the vacant land valuation procedures after estimating the increase in vacant land values for the assessment rate study, the residential assessment rate estimated for 1991-1992 would have been within its statutory tolerance.

### **State Board of Equalization Statutory Authority**

The state board had no statutory authority to consider information other than the final 1991 assessed values submitted by the county assessors, and the state board was faced with a September 20, 1991, deadline for adjusting the residential assessment rate estimated for 1991-1992.

Fortunately, the General Assembly had reconvened for a 1991 Special Session to revise school finance statutes. A reduction in the residential assessment rate from 14.34 percent to 13.78 percent could have increased the "backfill requirements" for State of Colorado financial aid to school districts. The legislature enacted amendments

to 39-1-104.2(7), C.R.S., that allowed the state board to consider, "any other reliable and relevant information which is based upon generally accepted appraisal methods and which is consistent with section 3 of Article X of the State Constitution, including, but not limited to, any valuation for assessment study for such year which is conducted pursuant to section 39-1-104(16). Using this new authority, the state board allowed the 14.34 percent residential assessment rate estimated for 1991-1992 to stand.

In 1992, a review of the 1991 state board ordered reappraisals indicated that the net effect of reappraisal of vacant land, commercial, and residential properties in all counties under reappraisal orders was a reduction in the verified residential assessment rate to 13.76 percent.

### **1993 AND 1994**

In 1992, the State Auditor reviewed the Division's procedures for estimating the residential assessment rate. No material audit exceptions were noted. Also in 1992, using new assessed value estimation procedures and a residential target percentage of 44.74 percent, the Division estimated a residential assessment rate for 1993-1994 of 12.86 percent (rounded).

In November 1992, the electorate passed Constitutional Amendment Number One creating Article X, section 20 of the Colorado Constitution. The amendment is sometimes referred to as the TABOR Amendment (Taxpayers' Bill of Rights) or the Bruce Amendment (after the author Douglas Bruce). The amendment constrained the financial authority of state and local governments. Among its provisions were the requirements for elections to authorize increases in property tax mill levies, the residential assessment rate, and the overall entity revenue generation and spending.

Mill levy increases are allowed only if approved by the voters. Mill levies are calculated by dividing the taxing entity's proposed (budgeted) property tax revenue by the total assessed value within the taxing jurisdiction. Taxing entities must know the final assessed values in order to prepare for an election. This effectively prohibited the state board from adjusting the residential assessment rate by September 20, less than three weeks before elections were to be held. Therefore, in 1993 the General Assembly repealed 39-1-104.2(7), C.R.S., which contained the state board's authority to adjust the residential assessment rate if it were found to be in error by one-half of one percent or more.

Also in 1993, the target percentage of 44.74 percent and the estimated residential assessment rate of 12.86 percent (rounded) were enacted into law, 39-1-104.2(3)(d), C.R.S. Verification of the estimate using final 1993 assessed values submitted by the assessors indicated a residential assessment rate of 12.16 percent. The rate was

outside the one-half of one-percent tolerance, which had been permitted by 39-1-104.2(7)(b), C.R.S., by two tenths of one percent. The miss was attributable to an under-estimate of residential values statewide.

The under-estimate was due to lack of recognition on the part of the assessors of the surge in residential values just prior to the June 30, 1992, appraisal date. Generally, the trending of sales data to the new level of value trending point was not accomplished by the assessors in time to be included in the residential assessment rate study conducted in 1992. Repeal of the state board's authority to adjust the rate required that the 12.86 percent residential assessment rate stand for 1993-94.

### **1995 AND 1996**

In December 1994, the Division estimated a residential assessment rate for 1995-1996 of 10.50 percent using new assessed value estimation procedures and a residential target percentage of 45.29 percent. In April 1995, the Division contacted the 16 largest counties, in terms of overall total assessed value, and asked these counties for their updated reappraisal values. These values were compared with the counties initial projections. Due to changes in many of their original estimates, the rate was recalculated and this recalculation produced a residential rate of 10.36 percent. HB 95-1136 was amended to reflect the 10.36 percent prior to its passage. After the Abstracts of Assessment were delivered to the Division, the residential rate was again recalculated. The assessor and county board changes reflected in the abstracts revealed that the rate should have been 10.02 percent.

### **1997 AND 1998**

The residential assessment rate was estimated to be 9.71 percent in December 1996. The residential target percentage was established at 46.17 percent. In April 1997, the Division contacted all counties and verified their initial projections or made appropriate changes, as necessary. Due to changes in some of the original estimates, the rate was recalculated. The recalculation produced a residential rate of 9.74 percent. SB 97-026 was amended to reflect the 9.74 percent assessment rate.

After the 1997 Abstracts of Assessment were delivered to the Division, the residential rate was again recalculated. The assessor and county board changes reflected in the abstracts revealed that the rate should have been 10.08 percent. In 1998, errors in excess of \$280 million (net) were discovered in Eagle County's 1997 Abstract, which changed the true rate from 10.08 to 9.96 percent.

Because the 1997-1998 residential assessment rate was under-estimated, it is essential to understand what has occurred with the residential rate in the past so that its future can be more accurately predicted. All previous rates had two common elements; more residential properties were being built than nonresidential properties, and existing residential properties were increasing in value at a faster rate than non-residential properties. However, as of 1996, nonresidential properties not only closed this gap but also had significantly outpaced residential assessments. With few exceptions, count projections for nonresidential properties were under-estimated; and, in many instances, significantly under estimated as late as April 15, 1997. However, since most counties are now capable of doing multiple regression analysis and accurate time trending, it is expected that future estimates will be more precise.

### **1999 AND 2000**

Established procedures, as previously cited, were used to estimate the residential assessment rate for 1999-2000, with two exceptions: 1) oil and gas estimates were based upon actual sales data reported to the Colorado Oil and Gas Conservation Commission, and 2) all counties were contacted in April, 1999, to update possible changes from their original estimates. After appropriate changes were made, the residential assessment rate was determined to be 9.83 percent. The actual rate, based upon the 1999 Abstracts of Assessment, was 9.81 percent.

These changes in methodology, in addition to more counties time-trending sales data, produced the most accurate rate ever determined. However, because of TABOR, the rate had to remain at 9.74 percent, since TABOR doesn't allow an upward change in the residential assessment rate.

### **2001 AND 2002**

The procedures followed in 1999-2000 were used to estimate the residential assessment rate for 2001-2002 because of the accuracy of the final results. The residential rate is estimated to be 9.35 percent for 2001-2002. All data will be reviewed in April 2001, and appropriate changes made to the Residential Assessment Rate Model. The rate will be recalculated and changed, if necessary. The General Assembly will be informed of the final estimate in April.



### **Recap of Residential Assessment Rates**

1983-1986	21.00%
1987	18.00%
1988	16.00%
1989	15.00%
1991	14.34%
1993	12.86%
1995	10.36%
1997	9.74%
1999	9.74%
2001	9.35%

### **RESIDENTIAL ASSESSMENT RATE ESTIMATION METHODOLOGY**

Until 1992, each subsequent residential assessment rate estimate had benefited from fewer years between levels of value and improved estimation techniques. However, the traditional value estimation methodology suffered from several deficiencies.

First, the residential assessment rate estimates generated by the traditional methodology in 1986, 1988, and 1990 were substantially higher than they should have been. Errors in the estimated residential assessment rate of better than 1.4 percent for 1986 and approximately one-half of one percent for 1988 and 1990 were less than desirable.

The primary cause of this problem appeared to be in the values estimated for vacant land, commercial, and industrial property where value changes had been based on sales data collected for the new level of value. More recently, in 1992, residential sales data had not been time trended, i.e. residential sales data had not been adjusted for changes in economic conditions.

Second, the collected sales data, especially in the larger counties, were not representative of the value ranges within the above mentioned classes of property within a county. In recognizing this fact, most of the assessed value change estimates made during the aforementioned residential assessment rate studies were based on assessor estimates rather than sales data. In the nine large metropolitan counties, which account for approximately 80 percent of residential real property assessed value and 70 percent of all other property assessed value, there was almost exclusive reliance on assessor estimates rather than change estimates based on sales data.

Third, visiting each county to collect these questionable data was fairly costly in terms of time and in terms of per diem and other travel expenses.

As a result of these considerations, an alternative to the traditional methodology employed to estimate the residential assessment rate was developed for the 1992 residential assessment rate study. This alternative was modified for the study conducted in 1994.

## **1990 TRADITIONAL METHODOLOGY TO ESTIMATE THE RESIDENTIAL RATE**

The 1988 and 1990 studies had several phases including verification of the 1989 rate; planning and organizing the 1990 study; and collecting and processing of data to estimate the residential assessment rate.

### **Planning and Organization**

This activity consisted of a comprehensive analysis of study needs including data, manpower, and equipment. Goals and objectives were established and a work plan was developed which included tasks and time frames. Itineraries for visiting each county assessor's office were planned by each of the Division appraisers assigned to collect sales data. All county assessors were notified. Plans were also made to enhance and test all computer programs.

### **Data Collection**

Each county assessor was personally contacted. While in each county, Division staff collected and analyzed property sales data. The sales used generally occurred during the eighteen months prior to the June 30 data collection trending point. A percentage change was then calculated or estimated for each class or subclass of property.

The total of verified sales prices was divided by the total of actual values of the sold properties for each subclass of property. The results of these calculations indicated the percentage increase or decrease for each property subclass. Data collection activities varied from county to county depending on the level of computerization and the status of reappraisal analysis in the county.

Each assessor was asked for an opinion as to the accuracy of estimated changes in subclass values. When the assessor disagreed with the original estimates, the assessor's opinion was given greater weight and the estimates were adjusted until there was agreement. The data collection procedures were used for vacant land, residential, commercial, and industrial properties.

Alternative procedures were adopted for agricultural lands, producing metal mines, producing coal mines, oil and gas, earth and stone, personal property, and state assessed property. This is illustrated by the following examples from the 1990 residential assessment rate study.

For 1991, a \$40 million statewide increase in agricultural land values was estimated due to higher ten-year average commodity prices. No change in the 13 percent capitalization rate was anticipated for 1991-1992. The projected 1991 nonresidential agricultural improvement values were unchanged, based on assessor estimates.

Oil and gas production and assessed value changes for each county in 1990 were estimated using production and price forecasts made available by the Colorado Oil and Gas Conservation Commission.

Lacking reliable production and price forecasts for producing metal mines, producing coal mines, and earth and stone operations, the 1990 values of these properties were estimated to be unchanged for 1991.

Personal property value for 1991 was estimated to be equivalent to the value reported in 1989.

Total state assessed property value for 1990 indicated an increase of approximately 0.7 percent. A smaller allowance for growth was estimated for 1991 to offset the probable effects of depreciation and deferred maintenance of plant and equipment. The total of the adjustments indicated a statewide increase in state assessed value of approximately 3.1 percent.

In addition to estimating the percentage changes in property subclasses, data collection also included gathering the necessary information to calculate the 1991 residential real property target percentage. These data were collected using final new construction figures reported by the counties for 1989 and 1990 and natural resources production volume data reported by the county assessors in 1988 and 1990

### **Data Processing**

All spreadsheet and database programs used in collecting and processing data were completely rewritten in 1990 to enhance their operation. The collected data were processed and the adjusted residential assessment rate was calculated as the following example from the 1990 residential assessment rate study illustrates.

The 1989 total value by class, 1989 and 1990 net new construction by class, and the net changes in natural resources production volumes reported between 1988 and 1990

were processed using electronic spreadsheets. New construction and the assessed value associated with the changes in natural resources production volumes were added to the 1989 values. The data, along with the values estimated for 1991 were used to produce the following results:

1. The 1989 residential real property value for assessment was adjusted to eliminate the effects of rounding the rate to 15 percent; and then the net residential new construction reported in 1989 and 1990, including that for agricultural residences and agricultural mobile homes, was added to total \$13,151,978,977.
2. The 1989 actual total nonresidential property assessed value was adjusted by adding 1989 and 1990 net other new construction; and then the assessed values associated with the net changes in production volumes for producing metal mines, coal mines, oil and gas leaseholds and lands, and earth and stone operations between 1988 and 1990, were added to total \$16,354,647,086.
3. Using the results of the foregoing calculations the 1991 residential target percentage was determined to be 44.57 percent.
4. Next, the 2,700 individual factors which had been estimated for each subclass for each county were entered into a database computer program. The program calculated composite percentages by class which were applied to the appropriate 1990 class values. The residential real property percentage of statewide value for assessment, assuming the residential assessment rate remained at 15 percent, was thereby determined to be 45.68 percent
5. Having calculated the 1991 residential target percentage and value estimates, the residential assessment rate for 1991-1992 could then be determined. The following are the algebraic equations used in calculating the residential assessment rate shown in Addendum A:

**R** = Projected 1991 assessed value of residential real property assuming a 15 percent residential assessment rate (\$13,144,184,938 which includes a \$20,229,740 reduction to account for County Board's of Equalization adjustments)

**T** = Projected total 1989 assessed value (\$28,771,943,401 which includes a \$174,984,210 reduction to account for County Board's of Equalization adjustments)

**D** = Desired 1991 residential target percentage (44.57 percent rounded)

**C** = The then current residential assessment rate (15 percent)

**X** = Assessed value necessary to subtract from the projected 1991 residential real property value in order to achieve the desired residential rate (\$576,750,759). It is necessary to carry the target percentage out to 14 decimal places to exactly duplicate this number. However, two decimal places are sufficient to calculate the residential assessment rate to two decimal places.

**Y** = Adjusted residential assessment rate necessary to maintain the 1995 target percentage (14.34 percent or 14 percent rounded).

Solving for **X**:

$$R - X = (T - X)D \text{ or } X = \frac{R - TD}{1 - D}$$

Solving for **Y**:

$$\frac{R}{C} = \frac{R - X}{Y} \text{ or } Y = \frac{C(R - X)}{R}$$

It is possible to further simplify these equations by substituting the algebraic value for "X" in the first equation in place of the "X" in the second equation and then, using algebraic simplification, to produce a single equation for "Y." This single equation can then be used as a cross check to ensure that the rate calculation is accurate. The form of this single equation is as follows:

Unknown Rate x 1991 Residential Estimated <u>Actual</u> Value	44.57%	
-----	=	----- or
Total 1991 Estimated Other <u>Assessed</u> Value	55.43%	
 Unknown Residential Rate x (\$13,144,184,940 / .15)	44.57%	
-----	=	----- or
\$15,627,758,460	55.43%	
 Unknown Residential Rate x \$87,627,899,600	44.57%	
-----	=	----- or
\$15,627,758,460	55.43%	
 Unknown Residential Rate	= .1434 or	
	14% rounded	

## **Analysis, Findings, and Conclusions**

The relatively modest increase, from 1989 to 1991, in the residential target percentage, from 44.51 percent to 44.57 percent was attributable to residential new construction being offset by a combination of all other property new construction and increased oil and gas production.

### **1992 METHODOLOGY TO ESTIMATE THE RESIDENTIAL RATE**

During the process of estimating the residential assessment rate for 1991, several alternative methodologies were also employed to test their accuracy compared to the traditional methodology, described above, which had been used to estimate the residential assessment rate. The most successful of these alternative methods used the 1991 target percentage of 44.57 percent and the annualized yearly change in values for each class of property between the sales data collection trending points of January 1, 1984, and June 30, 1988, projected to June 30, 1990. This produced an estimated residential assessment rate of 13.74 percent for 1991-1992. The verified rate for 1991-1992 using final assessed values submitted by the assessors in 1991 was 13.78 percent, a miss of four one-hundredths of one percent.

The accuracy of the linear estimate was very encouraging and suggested that a large spreadsheet model could be constructed which would allow linear analysis by class of property within each school district or school district fragment (portion of a school district) within each county. Additionally, such a projection model would allow, through the use of factored values, the opportunity to "smooth" changes over a two-year period of time to eliminate the effects of events such as the Persian Gulf War on oil and gas values or the initiation of limited gaming in Gilpin and Teller Counties on commercial property values. These linearized estimates could then be used as "benchmarks" when discussing value changes to June 30, 1992, with the various county assessors.

After constructing the Division's Projection Model, it was discovered that assessed value projections for each of the 176 school districts could be developed for use by the Department of Education (DOE) in its State-Aid-To-Schools' Model. Working with Legislative Council, which used the same DOE Model, a standardized spreadsheet format was agreed upon. Eventually, a spreadsheet program was written to accurately collapse the school district fragment values, found in each county within the final values area of the Division's Projection Model, into a single record of assessed value by class of property for each of the 176 school districts.

The final residential factors used in the estimate of the residential assessment rate generally bore little resemblance to the weighted averages generated by the sales analysis employed within the traditional methodology to estimate the residential rate. Since accurate sales data to estimate vacant land and commercial and industrial property values have always been unavailable, it was decided to forgo the sales analysis in the 1992 Residential Assessment Rate Study.

Other than the benchmark linear value changes by school district fragment, no cross check to the assessor's value change estimates was available. Also, the school district fragment information was unfamiliar to assessors who were more accustomed to thinking in terms of their own developed "economic areas" which rarely corresponded to the borders of a county's school district fragments. Finally, the residential property change information was presented to the assessors as "actual values" prior to the application of a residential assessment rate rather than using the previous rate of 14.34 percent. Each of these changes in methodology acted to reduce the accuracy of the estimate and was corrected during the 1994 Residential Assessment Rate Study.

#### **1994 METHODOLOGY TO ESTIMATE THE RESIDENTIAL RATE**

Early in 1994, the General Assembly requested that Legislative Council predict assessed values by class of property by county through 1998. Nancy McCallin, Senior Economist for Legislative Council, developed growth factors for each class of property in each county for 1994 through 1998. The factors and a number of individual adjustments were incorporated in a series of Division Projection Models to calculate the residential assessment rate for each change in level of value and to produce new assessed values for each year.

Then, the final values for the school district fragments in each county from each year were collapsed into the 176 school districts so that state aid to schools could be calculated through 1998. In this process, Legislative Council also produced a projection of the percent changes in assessed values for each class of property within each county for 1995.

The percent change in county assessed values, along with Division linear assessed value percent change projections, were incorporated into spreadsheet programs developed for each county. The spreadsheets were then used by Division appraisers to collect sales data for the 1994 residential assessment rate study. In both cases, the final assessed value change projections were expressed as percentage changes from the final 1994 assessed values submitted by the county assessors. In this way, negative percent changes indicated that growth projections had already been exceeded by 1994 and positive percent changes indicated the remaining percent change from 1994 values necessary to achieve the projections.

One exception to the process was in the oil and gas class. The Colorado Oil and Gas Conservation Commission, due to a change in its computer system, was unable to provide projections of volumes and prices by county to the end of 1994. The initial percent change entered for the class was simply the percent difference of 1994 assessed values compared to 1993 assessed values.

Incorporated in the customized spreadsheets were Denver Board of Realtor median percent changes for residential single family sales from the first six months of 1992 compared to the first six months of 1994 by county, where available. All accompanying residential valuation information was expressed as assessed value at 12.86 percent.

Also included in the customized spreadsheets were the names of all school districts and school district fragments within each county. This feature was developed to allow the association, as nearly as possible, of the assessor's "economic areas" with the school districts within each county.

Development of the customized data collection spreadsheets for each county was accomplished using spreadsheet programs which pulled projected assessed value percent changes by class of property and school district names from other files and inserted these in a master sales data collection spreadsheet template which was subsequently saved as a new file under the county's name.

Additionally, each county was contacted to provide, in either electronic or hard copy form, qualified residential property sale data, current assessor actual values, date of sale, and economic area associated with each property. Similar qualified/verified commercial sales data were also requested. These sales data were loaded into the appropriate county's customized sales data collection spreadsheet and in many cases sorted and analyzed by an appraiser before the appraiser visited the county.

Most large counties and some smaller counties had completed the weighted monthly median regression analysis of their sales for various residential subclasses over the 24-months preceding June 30, 1994. In these cases, the percent change indicated over the entire 24-month period for the residential subclasses within the county were developed and weighted by the 1994 relationship of the subclass to total residential value in the county. Thereby, composite factors for the residential class of property were developed for these counties.

Each county was visited and factors were developed for each class of property, except state assessed property which was estimated to increase by 7 percent from 1994 to 1995. The assessor was asked to estimate percent changes for each class of property using only the percent changes from 1994 values projected by the Division and Legislative Council. The sales data were analyzed by the economic areas associated



with the county's school districts and the assessor, or the assessor's designee, made a final estimate of percent changes in assessed values considering the analysis. Upon return to the Division, these percent changes were programmatically converted into factors by adding "1" to each of them. The factors were used in the Division's Residential Rate Calculation Model for the class of property throughout the entire county or, if individual factors had been developed for each school district, the factors were applied school district by school district. The residential assessment rate was calculated to be 10.50 percent.

As factor data were being collected by Division appraisers from the county assessors, Tom Dunn, economist for Legislative Council, was preparing econometric models for projection of assessed value by class of property by county. The results of his efforts to estimate a residential assessment rate using Division factors for the vacant land and residential classes and econometric results for the remaining classes of property was a rate of 10.49 percent.

Finally, the large counties were contacted during December 1994 to ensure that they were still comfortable with percent changes collected in October and November. The same counties were contacted at the beginning of April 1995 at which time projected assessed values by class of property were requested from each of them. From the assessed values, factors were developed by comparison with 1994 assessed values and the factors were entered into the Residential Assessment Rate Calculation Model to ascertain if they produced a significant difference in the 10.50 percent residential assessment rate estimated for 1995-1996. The General Assembly was informed prior to the end of April 1995, and the rate was corrected to 10.36 percent.

## **1996 METHODOLOGY TO ESTIMATE THE RESIDENTIAL RATE**

In 1996, the Legislative Council provided growth projection factors for each class of property by county. The factors and a number of individual adjustments were incorporated in a series of Division Projection Models to calculate the residential assessment rate for each change in level of value and to produce new assessed values for each year.

The percent changes in county assessed values were incorporated, along with Division linear assessed value percent change projections, within data files, from which printouts were produced for each county. The printouts were used by the Division appraisers collecting data for the 1997 residential assessment rate study. For both the Legislative Council and Division linear projections, the 1997 value projections were expressed as percentage changes from the final 1996 assessed values submitted by the county assessors. In this way, negative percent changes indicated that growth projections had

already been exceeded by 1996 and positive percent changes indicated the remaining percent change from 1996 values necessary to achieve the projections.

Incorporated in the county-specific printouts were Denver Board of Realtor median percent changes for residential single family sales from the first six months of 1994 compared to the first six months of 1996 by county, where available. All accompanying residential valuation information was expressed as assessed value at 10.36 percent.

Also included in the individual county printouts were the names of all school districts and school district fragments within each county. This feature was developed to allow the association, as nearly as possible, of the assessor's "economic areas" with the school districts within each county. The printouts were provided to the Division's data collection team for use in their visits to the individual county assessors' offices in late 1996.

Additionally, each county was contacted to provide, in either electronic or hard copy form, qualified residential, commercial, and industrial sales data, current assessor actual values, date of sale, and economic area associated with each property. The sales data were subjected to weighted monthly median sales ratio regression analysis, to develop residential, commercial and industrial projections for each county, and when feasible, for each school district fragment within each county. For most larger, and some smaller counties, it was possible to further stratify the residential sales into subclasses. In these cases, the percent change indicated over the entire 24-month period for the residential subclasses within the county were developed and weighted by the 1996 relationship of the subclass to total residential value in the county. Thereby, composite factors for the residential class of property were developed for the counties. Like the projections described in the preceding paragraph, the regression results were provided in the form of county-specific printouts to the data collection team for their assessor interviews.

Each county was visited and factors were developed for each class of property, except state assessed property which was estimated to increase by 2.5 percent from 1996 to 1997, and the oil and gas property class, wherein the Legislative Council's projected increase, 5.3 percent was adopted. This was done because the Legislative Council's oil and gas projection was very similar to one developed by the Division, using oil and gas production volumes for the first six months of 1996, in comparison to production for all of 1995, as provided by the Colorado Oil and Gas Conservation Commission. Use of the various assessors' projections for the oil and gas property class resulted in an overall decrease in oil and gas assessed value from 1996 to 1997. An overall increase appeared more likely.

The assessor was asked to estimate percent changes for each class of property using the linear changes projected by the Division, the Legislative Council's projections, the

regression of assessor sales for the data collection period, and the projections based on Denver Board of Realtors data. The projections were reviewed, and the assessor, or the assessor's designee, made a final estimate of percent changes in assessed values considering the analysis. The percent changes were programmatically converted into factors and used in the Division's Residential Rate Calculation Model. The residential rate was calculated to be 9.71 percent.

The eleven largest counties in terms of assessed value, and the five recreation/ski counties were contacted early April 1997, and were requested to provide projected assessed values by class of property. From the assessed values, factors were developed by comparison with 1996 assessed values, and the factors were entered into the Residential Assessment Rate Calculation Model to ascertain if they produced a significant difference in the 9.71 percent residential assessment rate estimated for 1997-1998. When it was determined that the rate should be 9.74 percent, the General Assembly changed the rate to that number.

## **1998 METHODOLOGY TO ESTIMATE THE RESIDENTIAL RATE**

In the past, Legislative Council's office has provided growth projection factors for each class of property by county. The percent changes in county assessed values were incorporated with Division linear assessed value percent change projections, and printouts were produced for each county. Because Legislative Council's projections were based on econometric models, its projections tended to exhibit little resemblance to the Division's and assessors' estimated projections. Having two sets of projections that varied so much seemed confusing to the assessors. Therefore, Division appraisers collecting data for the 1999-2000 residential assessment rate study used only the Division printouts for linear assessed value percent change projections. The 1999 value projections were expressed as percentage changes from the final 1998 assessed values submitted by the county assessors. As in previous years, also included in the Division's individual county printouts were the names of all school districts and school district fragments within each county.

Each county was asked to provide qualified/verified residential, commercial, and industrial property sales data. The sales data were subjected to weighted monthly median sales ratio regression analysis to develop residential, commercial, and industrial projections for each participating county. For most of the metro and recreational counties, it was possible to further stratify the residential sales into subclasses. In these cases, the percent change indicated over the entire 24-month period for the residential subclasses within the county were developed and weighted by the 1998 relationship of the subclass to total residential value in the county. Like the projections described in the preceding paragraph, the regression results were provided in the form of county-specific printouts for the assessor interviews.

Each county was visited and factors were developed for each class of property, except state assessed property which was estimated to increase by 3.33 percent from 1998 to 1999. Individual county projections for oil and gas were used because the Colorado Oil and Gas Conservation Commission's data was not current through December. We believed that due to the oil surplus and declining prices for the product at that time, it was prudent to wait until March when all the data would be available and realistic projections could be made for the class of property.

Assessors, or their designees, were asked to estimate percent changes for each class of property using the linear changes projected by the Division and the regression of assessor sales for the data collection period. After the projections were reviewed, final estimates of percent changes in assessed values were programmatically converted into factors and used in the Division's Residential Rate Calculation Model for the class of property throughout the entire county or, if individual factors had been developed for each school district, the factors were applied school district by school district. The 1999-2000 residential rate was calculated to be 9.90 percent.

All counties were contacted in April 1999. However, this time assessors were asked to furnish the Division with an abbreviated abstract that would provide projected assessed values by class of property and new construction values. After subtracting new construction from the assessed values, factors were developed by comparison with 1998 assessed values and then entered into the Residential Assessment Rate Calculation Model to ascertain if they produced a residential assessment rate other than 9.74 percent. For 1999-2000, the rate was determined to be 9.83 percent. However, Article X, section 20 of the Colorado Constitution does not allow an increase in the residential assessment rate. Therefore, the rate defaulted to 9.74 percent.

## **2000 METHODOLOGY TO ESTIMATE THE RESIDENTIAL RATE**

The procedures that were used in 1998 to estimate the residential assessment rate were repeated in 2000 because the methods used to develop the rate produced an extremely accurate rate (projected rate was 9.83 percent, actual rate was 9.81 percent). Division staff used printouts containing linear assessed value change projections and percent change projections to aid the assessors in determining projected changes in each class of property. Thirty-nine assessors also provided the Division with qualified sales data for residential, commercial, and/or industrial property. The sales data were time-trended using multiple regression analysis. Printouts were produced for the counties that submitted data, and the printouts were used to back up assessor estimates.

The projection for state assessed property was developed by Division state assessed staff. One factor was used for all counties. Also, instead of using county projections for oil and gas, it was decided to use a factor developed from data provided by the Oil and Gas Conservation Commission even though its data were not complete through December. The data indicated an increase of 23.1 percent, but the percentage will be higher because of the escalating prices paid for oil and gas.

All counties will be contacted in April to update initial projections. The oil and gas projection will be amended based on current data from the Oil and Gas Conservation Commission. The state assessed projection will also be reviewed.

Currently, the residential assessment rate is estimated to be 9.35 percent. The target percentage for residential property is 46.61 percent and for all other property is 53.39 percent.

Appendix A

10-Jan-2001

2001 PROJECTED RESIDENTIAL ASSESSMENT RATE CALCULATION - INCLUDING CBOE CHANGES AND INCLUDING NEW CONSTRUCTION

2001 RES ASSESSED	27,759,533,324		47.62%	10,476,739,893	
2001 OTHER ASSESSED	30,532,677,750		52.38%	13,164,118,045	
	-----				
	27,759,533,324	- X		58,292,211,073 - X) *	<b>0.4661</b>
	27,759,533,324	- X		27,168,364,325 - .4649X	
	591,168,999			.5351X	
		X		1,107,207,227	
	27,759,533,324			27,759,533,324	-
	-----			-----	<b>1,107,207,227</b>
	.0974				Y
	285,005,475,604			26,652,326,097	
				-----	Y
PROJECTED 2001 RATE		Y		0.09352	<b>9.35%</b>
PROJECTED RATE (.4661 * OTHER) / .5339					
CROSS CHECK	-----			0.09352	<b>9.35%</b>
CHECK	RES / 0.0974				







2001 RESIDENTIAL TARGET PERCENTAGE CALCULATION

10-Jan-2001

ESTIMATED 1999 RESIDENTIAL		X	=	46.49%	
ACTUAL 1999 NONRESIDENTIAL	24,323,723,514		=	53.51%	
ESTIMATED 1999 RESIDENTIAL		X =		100.00%	
ESTIMATED 1999 RESIDENTIAL	21,134,377,349		=	46.49%	
ACTUAL 1999 NONRESIDENTIAL	24,323,723,514		=	53.51%	
				100.00%	TOTAL
1999 NET RES NEW CONST	641,545,709				
2000 NET RES NEW CONST	879,804,685				
ESTIMATED 1999 RESIDENTIAL	21,134,377,349				
ADJ 1999 RES ASSESSED	22,655,727,743		=	46.61%	SUM OF RES ASSESSED
ADJ 1999 OTHER ASSESSED	25,954,208,719		=	53.39%	SUM OF OTHER ASSESSED
ACTUAL 1999 NONRESIDENTIAL	24,323,723,514			100.00%	TOTAL
1999 NET OTHER NEW CONST	770,780,969				
2000 NET OTHER NEW CONST	842,217,249				
2000 - 1998 NET MINES	(22,082,196)				
2000 - 1998 NET COAL	5,143,973				
2000 - 1998 NET OIL & GAS	29,203,329				
2000 - 1998 NET EARTH & STONE	5,221,880				

RARS METALLIC MINES ANALYSIS WORKSHEET - 2000

10-Jan-2001

	1998 \$/TON	2000 TONS	ADJ 1998	MOLY(6110) 1998	COUNTY FACTOR	MOLY 2000	2000 \$/TON
CLEAR CREEK	\$6.69	4,520,631	30,248,081	51,893,610	1	26,490,780	\$5.86
GRAND - COMBINED WITH CLEAR CREEK LAKE	\$0.00	4,520,531	0		0	8,315,230	\$0.00
		-----				-----	
		9,041,162				34,806,010	
	1998 \$/TON	2000 TONS	ADJ 1998	PREC(6120) 1998	COUNTY FACTOR	PREC 2000	2000 \$/TON
BOULDER	\$0.00	2,030	0	2,900	0	1,710	\$0.84
CLEAR CREEK	\$0.00		0	0	0		\$0.00
COSTILLA	\$0.00		0	0	0		\$0.00
GILPIN	\$0.00		0	0	0		\$0.00
HINSDALE	\$0.00	429	0	0	0	242,750	\$565.85
LAKE	\$0.00		0	0	0		\$0.00
LA PLATA	\$0.00		0	0	0		\$0.00
MONTEZUMA	\$0.00		0	0	0		\$0.00
OURAY	\$0.00		0	0	0		\$0.00
PARK	\$0.79	0	0	249,820	0	2,620	\$0.00
PITKIN	\$0.00	0	0	0	0		\$0.00
RIO GRANDE	\$0.00		0	0	0		\$0.00
SAN JUAN	\$0.00		0	0	0		\$0.00
SAN MIGUEL	\$0.00		0	0	0		\$0.00
TELLER	\$0.66	11,710,205	7,759,884	7,156,200	1	10,241,490	\$0.87
		-----				-----	
		11,712,664				10,488,570	
	1998 \$/TON	2000 TONS	ADJ 1998	BASE (6130) 1998	COUNTY FACTOR	BASE 2000	2000 \$/TON
COSTILLA	\$0.00		0	0	0		\$0.00
FREMONT	\$0.00		0	0	0		\$0.00
LAKE	\$3.52		0	767,530	0		\$0.00
SAN JUAN	\$0.00		0	0	0		\$0.00
		-----				-----	
		0				0	
	1998 \$/TON	2000 TONS	ADJ 1998	STRA(6140) 1998	COUNTY FACTOR	STRA 2000	2000 \$/TON
JEFFERSON	\$0.00	0	0	0	0	0	\$0.00
MESA	\$0.00	0	0	0	0	0	\$0.00
MONTROSE	\$0.00	0	0	0	0	0	\$0.00
SAN MIGUEL	\$12.12	0	0	20,100	0	0	\$0.00
		-----				-----	
		0				0	
	1998 \$/TON	2000 TONS	ADJ 1998	RETO(6150) 1998	COUNTY FACTOR	RETO 2000	2000 \$/TON
GARFIELD	\$0.00	0	0	0	0	0	\$0.00
		-----				-----	
		0				0	
		-----				-----	
		20,753,826	38,007,964	60,090,160		45,294,580	
WEIGHTED NET DIFFERENCE			0.6325	-36.75%			
BALANCING DIFFERENCE		24,545,082 (3,791,256)	(22,082,196)			48,644,390 (3,349,810)	

## RARS COAL MINES ANALYSIS WORKSHEET - 2000

10-Jan-2001

	COAL 1998 \$/TON	2000 TONS	ADJ 1998 ASSESSED VALUE	ACT 1998 ASSESSED VALUE	COUNTY FACTOR	ACT 2000 ASSESSED VALUE	COAL 2000 \$/TON
ADAMS	\$0.00		0	0	0		\$0.00
ALAMOSA	\$0.00		0	0	0		\$0.00
ARAPAHOE	\$0.00		0	0	0		\$0.00
ARCHULETA	\$0.00		0	1,090	0		\$0.00
BACA	\$0.00		0	0	0		\$0.00
BENT	\$0.00		0	0	0		\$0.00
BOULDER	\$0.00		0	0	0		\$0.00
CHAFFEE	\$0.00		0	0	0		\$0.00
CHEYENNE	\$0.00		0	0	0		\$0.00
CLEAR CREEK	\$0.00		0	0	0		\$0.00
CONEJOS	\$0.00		0	0	0		\$0.00
COSTILLA	\$0.00		0	0	0		\$0.00
CROWLEY	\$0.00		0	0	0		\$0.00
CUSTER	\$0.00		0	0	0		\$0.00
DELTA	\$0.81	1,750,926	1,418,083	1,045,150	1	750,300	\$0.43
DENVER	\$0.00		0	0	0		\$0.00
DOLORES	\$0.00		0	0	0		\$0.00
DOUGLAS	\$0.00		0	0	0		\$0.00
EAGLE	\$0.00		0	0	0		\$0.00
ELBERT	\$0.00		0	0	0		\$0.00
ELPASO	\$0.00		0	0	0		\$0.00
FREMONT	\$2.59	353,942	918,192	239,210	4	260,720	\$0.74
GARFIELD	\$0.00		0	0	0		\$0.00
GILPIN	\$0.00		0	0	0		\$0.00
GRAND	\$0.00		0	0	0		\$0.00
GUNNISON	\$1.73	8,203,204	14,228,458	11,591,570	1	13,744,710	\$1.68
HINSDALE	\$0.00		0	0	0		\$0.00
HUERFANO	\$0.01		0	120	0		\$0.00
JACKSON	\$0.00		0	120	0		\$0.00
JEFFERSON	\$0.00		0	0	0		\$0.00
KIOWA	\$0.00		0	0	0		\$0.00
KIT CARSON	\$0.00		0	0	0		\$0.00
LAKE	\$0.00		0	0	0		\$0.00
LA PLATA	\$0.79	245,719	194,716	175,890	1	223,270	\$0.91
LARIMER	\$0.00		0	0	0		\$0.00
LAS ANIMAS	\$0.00		0	0	0		\$0.00
LINCOLN	\$0.00		0	0	0		\$0.00
LOGAN	\$0.00		0	0	0		\$0.00
MESA	\$0.63	284,557	177,903	273,360	1	156,510	\$0.55
MINERAL	\$0.00		0	0	0		\$0.00
MOFFAT	\$1.89	7,788,438	14,740,402	14,282,230	1	14,191,640	\$1.82
MONTEZUMA	\$0.00		0	0	0		\$0.00
MONTROSE	\$1.72	359,410	619,023	665,390	1	608,630	\$1.69
MORGAN	\$0.00		0	0	0		\$0.00
OTERO	\$0.00		0	0	0		\$0.00
OURAY	\$0.00		0	0	0		\$0.00
PARK	\$0.00		0	0	0		\$0.00
PHILLIPS	\$0.00		0	0	0		\$0.00
PITKIN	\$0.00		0	0	0		\$0.00
PROWERS	\$0.00		0	0	0		\$0.00
PUEBLO	\$0.00		0	0	0		\$0.00
RIO BLANCO	\$1.31	1,333,044	1,741,894	1,962,040	1	1,709,200	\$1.28
RIO GRANDE	\$0.00		0	0	0		\$0.00
ROUTT	\$1.37	9,924,488	13,567,523	12,226,050	1	12,802,400	\$1.29
SAGUACHE	\$0.00		0	0	0		\$0.00
SAN JUAN	\$0.00		0	0	0		\$0.00
SAN MIGUEL	\$0.00		0	0	0		\$0.00
SEDGWICK	\$0.00		0	0	0		\$0.00
SUMMIT	\$0.00		0	0	0		\$0.00
TELLER	\$0.00		0	0	0		\$0.00
WASHINGTON	\$0.00		0	0	0		\$0.00
WELD	\$0.00		0	0	0		\$0.00
YUMA	\$0.00		0	0	0		\$0.00
		30,243,728	47,606,193	42,462,220		44,447,380	
WEIGHTED AVERAGE			1.1211	12.11%			
NET ASSESSED DIFFERENCE			5,143,973				
BALANCING		26,496,313				34,540,120	
DIFFERENCE		3,747,415				9,907,260	

## RARS EARTH &amp; STONE ANALYSIS WORKSHEET - 2000

10-Jan-2001

	E&S 1998 \$/TON	2000 TONS	ADJ 1998 ASSESSED VALUE	ACT 1998 ASSESSED VALUE	COUNTY FACTOR	ACT 2000 ASSESSED VALUE	E&S 2000 \$/TON
ADAMS	\$0.28	9,266,646	2,567,540	1,883,430	1	2,399,160	\$0.26
ALAMOSA	\$0.39	24,893	9,595	8,360	1	9,180	\$0.37
ARAPAHOE	\$0.20	83,875	16,366	292,370	0	29,270	\$0.35
ARCHULETA	\$0.41	585,086	238,114	140,230	2	333,640	\$0.57
BACA	\$0.35	52,916	18,358	40,180	0	16,430	\$0.31
BENT	\$0.20	127,778	25,489	21,480	1	34,000	\$0.27
BOULDER	\$0.38	1,615,192	620,797	358,070	2	1,265,660	\$0.78
CHAFFEE	\$0.00	258,346	0	0	0	92,950	\$0.36
CHEYENNE	\$0.30	20,757	6,238	2,380	3	5,291	\$0.25
CLEAR CREEK	\$0.34	1,609,737	540,533	388,770	1	589,820	\$0.37
CONEJOS	\$0.00	11,232	0	0	0	8,370	\$0.75
COSTILLA	\$0.72	165,660	118,829	69,010	2	122,660	\$0.74
CROWLEY	\$0.64	17,120	10,981	4,400	2	5,400	\$0.32
CUSTER	\$0.66	167,104	109,761	12,350	9	15,820	\$0.09
DELTA	\$0.25	679,119	168,233	135,880	1	223,170	\$0.33
DENVER	\$0.00		0	0	0		\$0.00
DOLORES	\$0.00		0	0	0		\$0.00
DOUGLAS	\$0.35	768,323	265,923	347,680	1	469,970	\$0.61
EAGLE	\$0.27	2,027,129	551,520	475,690	1	409,990	\$0.20
ELBERT	\$0.65	438,331	286,794	60,850	5	222,440	\$0.36
ELPASO	\$0.33	5,167,839	1,724,107	1,465,350	1	1,885,020	\$0.51
FREMONT	\$0.77	2,562,063	1,983,669	2,002,580	1	2,264,550	\$0.88
GARFIELD	\$0.40	1,732,387	688,123	534,880	1	534,030	\$0.31
GILPIN	\$0.00		0	0	0		\$0.00
GRAND	\$0.22	475,878	105,898	72,420	1	153,740	\$0.32
GUNNISON	\$0.97	189,164	182,872	308,260	1	134,580	\$0.71
HINSDALE	\$0.00	0	0	0	0	0	\$0.00
HUERFANO	\$0.00	63,214	0	32,560	0	20,510	\$0.32
JACKSON	\$0.34	62,589	21,156	28,620	1	6,716	\$0.11
JEFFERSON	\$0.40	8,354,281	3,322,380	2,327,560	1	3,049,260	\$0.36
KIOWA	\$0.10	37,650	3,790	6,550	1	4,390	\$0.12
KIT CARSON	\$0.22	290,450	64,242	54,080	1	69,440	\$0.24
LAKE	\$0.50	61,429	30,680	10,730	3	34,380	\$0.56
LAPLATA	\$0.40	974,448	385,936	369,920	1	353,540	\$0.36
LARIMER	\$0.33	4,103,342	1,351,707	602,270	2	1,646,490	\$0.40
LAS ANIMAS	\$0.29	384,922	110,074	23,280	5	120,780	\$0.31
LINCOLN	\$0.22	308,650	67,020	30,760	2	70,930	\$0.23
LOGAN	\$0.27	439,444	118,337	128,990	1	78,290	\$0.18
MESA	\$0.25	2,483,710	628,642	383,860	2	748,490	\$0.30
MINERAL	\$0.53	6,860	3,627	2,620	1	2,630	\$0.38
MOFFAT	\$0.25	525,305	129,146	74,870	2	127,800	\$0.24
MONTEZUMA	\$0.35	383,646	132,708	143,290	1	237,530	\$0.62
MONTROSE	\$0.47	774,730	367,853	223,710	2	358,470	\$0.46
MORGAN	\$0.21	249,264	52,882	59,600	1	59,810	\$0.24
OTERO	\$0.27	233,779	64,022	40,600	2	112,000	\$0.48
OURAY	\$1.07	46,290	49,348	86,310	1	104,480	\$2.26
PARK	\$9.92		0	269,050	0	11,660	\$0.00
PHILLIPS	\$0.00	0	0	21,360	0	14,870	\$0.00
PITKIN	\$0.29	429,000	126,150	126,150	1	126,640	\$0.30
PROWERS	\$0.22	901,068	200,277	150,840	1	169,350	\$0.19
PUEBLO	\$0.23	1,264,842	295,924	136,260	2	357,360	\$0.28
RIO BLANCO	\$2.47	316,738	780,846	664,690	1	1,144,090	\$3.61
RIO GRANDE	\$0.54	67,183	36,282	42,980	1	43,030	\$0.64
ROUTT	\$0.34	1,657,737	568,918	459,150	1	589,060	\$0.36
SAGUACHE	\$0.50	0	0	2,090	0	2,090	\$0.00
SAN JUAN	\$0.00		0	0	0		\$0.00
SAN MIGUEL	\$6.24	62,495	389,881	95,070	4	106,340	\$1.70
SEDGWICK	\$0.00	0	0	2,700	0	7,710	\$0.00
SUMMIT	\$0.31	968,486	304,591	190,880	2	552,600	\$0.57
TELLER	\$0.36	53,392	19,447	16,870	1	41,210	\$0.77
WASHINGTON	\$0.21	152,724	32,066	28,360	1	29,210	\$0.19
WELD	\$0.30	9,988,627	2,998,031	2,244,170	1	3,887,160	\$0.39
YUMA	\$0.29	191,810	55,411	23,810	2	45,580	\$0.24
WEIGHTED AVERAGE		63,864,680	22,951,110	17,729,230		25,559,037	
NET ASSESSED DIFFERENCE			1.2945	29.45%			
BALANCING DIFFERENCE		42,534,827	5,221,880			14,557,730	
DIFFERENCE		21,329,853				11,001,307	

# Appendix H-1

RARS OIL & GAS ANALYSIS WORKSHEET - 2000

WELL	POIL 1998	ADJ 1998 ASSESSED VALUE	10-Jan-2001		COUNTY	POIL 2000	ADJ PRICE =	OIL 0.875	OIL 2000 PRICE	POIL 2001 ACTUAL	2001 POIL ASSESSED	2000 POIL ASSESSED	COUNTRY FACTOR
			ACT 1998 VALUE	ASSESSED VALUE									
ADAMS	\$16.70	10,270,416	\$12,819,470	0.8012	0.0000	\$14.07	614,967	97.14%		0	0	\$8,652,470	0
ALAMOSA	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
ARAPAHOE	\$11.74	906,832	\$1,651,700	0.5490	0.5490	\$13.78	77,221	96.69%		0	0	1,064,270	0
ARCHULETA	\$14.95	81,057	\$47,420	1.7093	1.7093	\$1.00	5,422	100.00%		0	0	5,422	0
BACA	\$17.04	632,843	\$1,313,330	0.4819	0.4819	\$18.04	37,138	18.37%		0	0	521,250	0
BENT	\$12.18	3,277	\$6,200	0.5285	0.5285	\$12.01	269	100.00%		0	0	3,230	0
BOULDER	\$17.08	2,321,980	\$2,924,790	0.7399	0.7399	\$13.00	135,950	100.00%		0	0	1,767,730	0
CHAFFEE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
CHEYENNE	\$15.72	9,885,402	\$19,912,760	0.4964	0.4964	\$14.27	628,680	23.27%		0	0	8,988,703	0
CLEAR CREEK	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
CONEJOS	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
COSTILLA	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
CROWLEY	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
CUSTER	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
DELTA	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
DENVER	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
DOLORES	\$14.38	1,733,615	\$1,983,070	0.8742	0.8742	\$13.04	120,569	100.00%		0	0	1,572,070	0
DOUGLAS	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
EAGLE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
ELBERT	\$15.90	1,426,793	\$1,637,750	0.8712	0.8712	\$10.22	92,030	100.00%		0	0	940,500	0
ELPASO	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
FREMONT	\$13.62	178,100	\$188,480	0.9449	0.9449	\$1.00	13,074	100.00%		0	0	13,074	0
GARFIELD	\$5.80	707,541	\$1,974,580	0.3583	0.3583	\$13.59	121,958	100.00%		0	0	1,657,820	0
GILPIN	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
GRAND	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
GUNNISON	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
HINSDALE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
HUERFANO	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
JACKSON	\$17.93	989,566	\$753,860	1.3127	1.3127	\$14.00	55,191	42.44%		0	0	772,884	0
JEFFERSON	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
KIOWA	\$15.69	2,734,649	\$4,104,680	0.6662	0.6662	\$14.05	174,283	96.32%		0	0	2,448,840	0
KIT CARSON	\$15.87	1,118,149	\$2,161,270	0.5174	0.5174	\$13.64	70,447	100.00%		0	0	861,140	0
LAKE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
LA PLATA	\$15.99	635,318	\$793,280	0.8009	0.8009	\$13.87	39,729	100.00%		0	0	551,100	0
LARIMER	\$2.69	74,527	\$107,690	0.6921	0.6921	\$14.25	27,658	20.85%		0	0	394,220	0
LAS ANIMAS	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
LINCOLN	\$15.41	1,168,159	\$1,701,650	0.6865	0.6865	\$13.84	75,810	100.00%		0	0	1,040,330	0
LOGAN	\$14.86	2,248,752	\$3,343,560	0.6726	0.6726	\$16.73	151,346	71.11%		0	0	2,531,770	0
MESA	\$1.72	3,307	\$136,050	0.0243	0.0243	\$13.28	1,924	100.00%		0	0	25,580	0
MINERAL	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
MOFFAT	\$16.25	5,067,144	\$6,797,570	0.7454	0.7454	\$14.42	311,869	90.75%		0	0	4,487,580	0
MONTAGANA	\$13.41	3,614,723	\$7,831,650	0.4616	0.4616	\$12.90	259,626	89.46%		0	0	3,478,300	0
MONTROSE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
MORGAN	\$15.11	804,742	\$1,017,690	0.7908	0.7908	\$13.76	53,247	53.02%		0	0	732,500	0
OTERO	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
OURAY	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
PARK	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
PHILIPS	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
PITKIN	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
PROWERS	\$13.29	74,358	\$20,410	3.6432	3.6432	\$12.62	5,596	100.00%		0	0	70,610	0
PUEBLO	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
RIO BLANCO	\$16.18	3,836,690	\$3,107,590	1.2346	1.2346	\$9.37	237,058	3.52%		0	0	2,220,180	0
RIO GRANDE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
ROUIT	\$19.91	1,317,947	\$1,444,080	0.9127	0.9127	\$16.20	66,204	90.65%		0	0	1,072,390	0
SAGUACHE	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
SAN JUAN	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
SAN MIGUEL	\$6.52	10,632	\$2,640	4.0272	4.0272	\$12.64	1,631	100.00%		0	0	20,610	0
SEDGWICK	\$16.66	0	\$41,560	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
SUMMIT	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
TELLER	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
WASHINGTON	\$15.80	10,417,212	\$13,028,130	0.7996	0.7996	\$14.16	659,401	93.67%		0	0	8,336,600	0
WELD	\$15.62	94,798,273	\$112,644,550	0.8416	0.8416	\$13.98	6,070,262	68.10%		0	0	64,839,440	0
YUMA	\$0.00	0	\$0	0.0000	0.0000	\$0.00	0	0.00%		0	0	0	0
WEIGHTED AVERAGE	\$6.41	10,118,570	157,062,003	203,497,470		\$5.61	10,118,570			0	0	140,168,493	0
NET ASSESSED DIFFERENCE			(46,435,467)	-22.82%						0.00%	0	-100.00%	

Appendix H-2

	SOIL 1998 \$/BBL	2000 PROD	ADJ 1998 ASSESSED VALUE	ACT 1998 VALUE	COUNTY FACTOR	SOIL 2000 \$/BBL	ADJ PRICE = 2000 PROD	% SEC	0 750 PROD PRICE	OIL 2000 PRICE	SOIL 2001 ACTU/L	2001 SOIL ASSESSED	2000 SOIL ASSESSED	COUNTY FACTOR
ADAMS	\$15 15	18,083	273,934	\$509,800	0.5373	\$12 74	18,083	2.86%	0	0	0	0	\$230,290	0
ALAMOSA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
ARAPHOE	\$13 72	2,646	36,297	\$51,620	0.7032	\$12 33	2,646	3.31%	0	0	0	0	32,620	0
ARCHULETA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
BACA	\$14 41	164,985	2,377,196	\$3,821,510	0.6221	\$11 98	164,985	81.63%	0	0	0	0	1,976,980	0
BENT	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
BOLDER	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
CHAFFEE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
CHEYENNE	\$13 32	2,073,460	27,618,713	\$29,642,850	0.9317	\$12 13	2,073,460	76.73%	0	0	0	0	25,151,640	0
CLEAR CREEK	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
CONEJOS	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
COSTILLA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
CROWLEY	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
CUSTER	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
DELTA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
DENVER	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
DOLORES	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
DOUGLAS	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
EAGLE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
ELBERT	\$11 84		0	\$51,140	0.0000	\$0 00	0	0.00%	0	0	0	0		0
ELPASO	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
FREMONT	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
GARFIELD	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
GILPIN	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
GRAND	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
GUNNISON	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
HINSDALE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
HUERFANO	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
JACKSON	\$14 68	74,865	1,098,926	\$1,363,540	0.8059	\$12 25	74,865	57.56%	0	0	0	0	917,235	0
JEFFERSON	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
KIOWA	\$13 94	6,654		\$183,140	0.0000	\$12 41	6,654	3.68%	0	0	0	0	82,580	0
KIT CARSON	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
LAKE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
LAPLATA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
LARAMIE	\$13 34	104,970	1,400,476	\$2,553,490	0.5485	\$12 66	104,970	79.15%	0	0	0	0	1,329,170	0
LAS ANIMAS	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
LINCOLN	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
LOGAN	\$6 81	61,482	418,678	\$876,770	0.4775	\$10 38	61,482	28.89%	0	0	0	0	638,010	0
MESA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
MINERAL	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
MOHAWK	\$0 00	31,762	0	\$0	0.0000	\$0 00	0	0.00%	0	0	0	0	376,710	0
MONTESUMA	\$12 47	31,756	396,135	\$396,110	1.0001	\$10 62	31,756	10.54%	0	0	0	0	337,200	0
MONTROSE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
MORGAN	\$14 13	47,187	666,610	\$682,870	0.9762	\$12 88	47,187	46.98%	0	0	0	0	607,630	0
OTERO	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
OURAY	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
PARK	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
PHILLIPS	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
PITKIN	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
PROWERS	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
PUEBLO	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
RIO BLANCO	\$14 16	6,488,026	91,852,906	\$110,151,410	0.8339	\$13 25	6,488,026	96.48%	0	0	0	0	85,986,430	0
RIO GRANDE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
ROUITT	\$0 00	6,828		\$0	0.0000	\$15 83	6,828	9.35%	0	0	0	0	106,100	0
SAGUACHE	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
SAN JUAN	\$0 00	1,020		\$0	0.0000	\$0 00	0	0.00%	0	0	0	0	13,280	0
SAN MIGUEL	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
SEDGWICK	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
SUMMIT	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
TELLER	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
WASHINGTON	\$14 11	44,544	628,350	\$1,025,300	0.6128	\$12 32	44,544	6.33%	0	0	0	0	548,890	0
WELD	\$1 85	2,843,141	5,263,962	\$4,522,000	1.1639	\$0 97	2,843,141	31.90%	0	0	0	0	2,734,860	0
YUMA	\$0 00			\$0	0.0000	\$0 00	0	0.00%	0	0	0	0		0
WEIGHTED AVERAGE	\$2 76	12,001,409	132,031,583	\$155,831,550		\$2 98	12,001,409		0	0	0	0	121,093,915	0
NET ASSESSED DIFFERENCE			84.73%	-15.27%									-100.00%	
			(23,799,967)										(121,093,915)	



Appendix H-4

	SGAS 1998		2000 PROD	ADJ 1998 ASSESSED VALUE		ACT 1998 ASSESSED VALUE	COUNTY FACTOR	SGAS 2000		ADJ PRICE = SGAS 2000 PROD	% SEC	0.750 GAS 2001		SGAS 2001 ACTUAL	2001 SGAS ASSESSED	2000 SGAS ASSESSED	COUNTY FACTOR
	W/MCF	VALUE		W/MCF	VALUE			W/MCF	PROD			W/MCF	PROD				
ADAMS	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
ALAMOSA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
ARAPAHOE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
ARCHULETA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
BACA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
BENT	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
BOULDER	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
CHAFFEE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
CHEYENNE	\$9.34	0	31,760	\$681,700	0.4352	\$24.98	0	0.49%	0	0.49%	0	0	0	0	0	793,282	0
CLEAR CREEK	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
CONEJOS	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
COSTILLA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
CROWLEY	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
CUSTER	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
DELTA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
DENVER	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
DOLORES	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
DOUGLAS	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
EAGLE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
EL PASO	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
ELBERT	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
FREMONT	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
GARFIELD	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
GILPIN	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
GRAND	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
GUNNISON	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
HINSDALE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
HUERFANO	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
JACKSON	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
JEFFERSON	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
KIOWA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
KIT CARSON	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
LAKE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
LA PLATA	\$1.40	0	6,729,595	\$227,060	41,496.4	\$0.70	0	1.64%	0	1.64%	0	0	0	0	0	4,986,780	0
LARIMER	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
LAS ANIMAS	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
LINCOLN	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
LOGAN	\$0.14	0	21,604	\$5,100	0.5829	\$1.54	0	0.38%	0	0.38%	0	0	0	0	0	33,280	0
MESA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
MINERAL	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
MOFFAT	\$0.00	0	180,721	\$0	0.0000	\$1.29	0	1.12%	0	1.12%	0	0	0	0	0	233,710	0
MONTEZUMA	\$4.62	0	14,141	\$35,260	1,8526	\$1.46	0	0.82%	0	0.82%	0	0	0	0	0	20,600	0
MONTROSE	\$9.48	0	21,200	\$200,907	0.4823	\$7.22	0	4.10%	0	4.10%	0	0	0	0	0	153,180	0
MORGAN	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
OTERO	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
OURAY	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
PARK	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
PHILLIPS	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
PITKIN	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
PROWERS	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
PUEBLO	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
RIO BLANCO	\$1.25	0	994,424	\$6,571,180	0.1887	\$5.16	0	3.88%	0	3.88%	0	0	0	0	0	5,132,610	0
RIO GRANDE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
ROUITT	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
SAGUACHE	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
SAN JUAN	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
SAN MIGUEL	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
SEDEGWICK	\$0.21	0		\$630	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
SUMMIT	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
TELLER	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
WASHINGTON	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
WELD	\$0.17	0	4,437	\$134,430	0.0066	\$5.38	0	0.00%	0	0.00%	0	0	0	0	0	23,880	0
YUMA	\$0.00	0		\$0	0.0000	\$0.00	0	0.00%	0	0.00%	0	0	0	0	0	0	0
WEIGHTED AVERAGE	\$0.42		7,997,882	\$11,228,808	8.071,920	\$0.76		7,997,882		0				0	0.00%	11,077,272	
NET ASSESSED DIFFERENCE				139,11%	39.11%										(11,077,272)		-100.00%



