OPEN FILE REPORT 85-4

COLORADO'S OIL AND GAS INDUSTRY: EMPLOYMENT PROJECTIONS TO 2000

By
Ann H. Scanlon

Colorado Geological Survey
1985

TABLE OF CONTENTS

DOI: https://doi.org/10.58783/cgs.of8504.oczb1539

INTRODUCTION

The purpose of this report is to provide a range of production projections and employment projections for Colorado's oil and gas industry through the year 2000. A number of variables affect the employment within the industry. The "macro" factors include world oil price, competition from foreign sources, government regulations, marketing forces and over-and-under utilization of production capacity. The "micro' factors include regional transportation capabilities and options, geologic formations, size of reservoir and proximity to other active sites. These factors affect employment trends both dependently and independently.

Although a general relationship exists between employment and production, the most prominent factors are price per production unit and the market for these products. The key variables examined in this report are reserves and decline rates, drilling activity related to both price and markets and production. The estimates are based on a delphi approach using the expertise of producers in the major fields of the state. As with all projections, the shorter term outlooks may present a more realistic view of the oil and gas industry future in the state.

FACTORS AFFECTING PRODUCTION

Production trends reflect a variety of both national and international influences in the industry. The resulting employment trends cannot be based on a single factor; however, general trends can be implied from the behavior of certain influences. The dynamics of the industry have changed drastically over the past decade. In the last four years, a variety of factors including conservation, improved technologies, declining oil prices, overproduction of gas, deregulation of prices and high interest rates have reduced drilling activity and caused a major drawdown in reserves. New discoveries have not been

sought to replace reserves produced. Changing government regulations have also changed the character of the industry. The deregulation of oil in 1981 was opportune from the standpoint of allowing price flexibility in a declining market. The phased decontrol of natural gas coupled with the renegotiation of take-or-pay contracts has resulted in some major structural changes in the industry.

The most prominent factors affecting production are the price and the market for these products. Both of these variables have a significant impact on the exploration and production phases of a project. In general, they have caused a decrease in drilling and a major drawdown in reserves. New discoveries have not been sought to replace reserves produced due to adverse economic conditions.

The price per barrel of oil has a direct impact on demand which in turn affects the amount of drilling activity. A decrease in the price per barrel can slow drilling. For example, if the cost to drill a well remains constant from year to year but the profit margin is lower due to declining selling prices, it may not be economically feasible to continue to explore and develop new wells. Therefore, reserves will not be replenished. If the price per barrel increases, exploration and drilling activities would accelerate. Additional reserves would be discovered which could become more economically attractive with higher prices.

An example of this situation is taken from the Annual Energy Outlook 1983 by the Department of Energy:

> ". . . the doubling of oil prices in real terms following the Iranian revolution, combined with normal constraints on the pace at which major new oil resources can be developed, made many of the small, higher cost, lower potential deposits in this country profitable and stimulated the entry of many more small drilling operators. The search for lower potential deposits and the employment of increasingly less-efficient crews and equipment led to a drop in the domestic crude oil finding rate (the average volume of

reserves added per foot drilled) in the 1979 through 1982 period, roughly 25 percent lower than that experienced in the preceding years."

Higher world oil prices would most likely stimulate the development and exploration of both oil and gas reserves. These higher oil prices could stimulate the demand for gas as a substitute for oil if gas were cheaper on a delivered energy basis.

The annual decline in gas consumption since 1980 is due to the combined influences of rising gas prices under phased deregulation, a weak economy, conservation, milder temperatures, substitution with coal and falling oil prices. This resulted in gas bubbles in many regions of the country where pipeline companies had supplies in excess of demand. Therefore, many gas wells were drilled, completed, and then shut-in. This resulted in a severe downturn in gas well exploration and development.

The cost of recovering proved oil and gas reserves varies greatly with the location and physical characteristics of individual reservoirs. A single large reservoir is generally less expensive to develop per unit of production than many small scattered reservoirs. Other factors that could affect gas prices include: additional imports from Canada and/or Mexico which would displace the more expensive domestic gas; more rapid development of deep sources of gas; and increased production of 'associated' gas if domestic drilling activity intensifies. The down-scaling of off-shore oil reserve estimates may affect the economics of on-shore fields.

New reserves must be expected to come from deeper and smaller deposits which will be more expensive to produce. To accommodate the country's growing petroleum consumption, imports of crude oil and natural gas liquids are expected to increase in the future.

In general, the total cost of maintaining current reservoir levels is expected to increase. Oil and gas are non-renewable resources; therefore, it will take more time and expense to locate and develop new sources of supply.

If conventional petroleum becomes much more expensive, a variety of known technologies can be expected to replace current oil and/or gas production processes. Natural gas may become a less expensive substitute for oil. The potential resource base for oil will increase with the development of unconventional heavy crude oils, shale oil, tar sands, gasoline and other liquid and gaseous fuels from coal.

THE STEPS TO DRILL A WELL

Drilling oil and gas wells requires a mobile labor force that is at a given site for only a very short period of time. The size of the drilling crews is not only related to the size of the job, but also to the geologic conditions and geographic accessibility which affect the effort required to complete the tasks. For convenience, the state is divided into two slightly differing geological areas: 1) Eastern Colorado and 2) Western Colorado. The major factors which distinguish these two areas include drilling location accessibility and type of formations. Wells in Eastern Colorado are more easily accessible since there are more roads, vegetation is sparce, well spacing is generally close and topography is less severe. Generally, formations in Western Colorado are harder and, therefore, require more time to drill. Eastern Colorado includes the producing areas of the Denver Basin, Las Animas Arch, Hugoton Embayment, Raton Basin and the Canon City Embayment. Western Colorado includes the producing areas of the Sand Wash Basin, Piceance Basin, San Juan Basin, Paradox Basin, Uinta Basin and North Park Basin.

In general, there are two phases to the development of a field. The first phase includes preparing the drill site, installing the rig, drilling and evaluation. The second phase involves installing the appropriate hardware for production and maintenance of the site. The steps are described below in detail. Each step includes the average person-days required for completion.

PHASE I - ASSESSMENT

Step 1: Preparing the drill site - Eastern Colorado - 16 person days
Western Colorado - 28 person days

Once it is decided to drill a well, leases are signed and drilling contracts are finalized. The operating company then determines the exact location to drill. The drilling contractor prepares the site for rig set-up and additional equipment. This includes clearing and leveling the land, building access roads, providing water, and digging mud pits.

Step 2: Rigging up - Eastern Colorado - 16 person days
Western Colorado - 32 person days

The contracted crew moves the rig and leased equipment on location so drilling can commence.

Step 3: Drilling - Eastern Colorado - 112, 240, and 400 person days for shallow, intermediate and deep holes, respectively.
Western Colorado - 196, 640, and 960 person days for shallow, intermediate and deep holes, respectively.

Drilling begins and continues until soft unstable surface formations (i.e., gravel beds, alluvium) have been drilled. The drill pipe is pulled (tripped out) and surface casing is run and cemented into place. An independent casing crew moves in to run the casing, while an independent oil well cementing service company usually performs the job of cementing the casing in place. To resume drilling, the drill stem and a new, smaller bit are tripped back into the hole and drilling continues. As formations get harder and drilling progresses, round trips are necessary to replace worn bits and to facilitate testing. Depending on the final depth of the well, intermediate string casing may be run and

cemented. Drilling continues until the final proposed depth or formation is encountered. Often, whole cores (coring) are taken rather than drilling through these formations. Coring a well adds considerable delay in drilling time as the coring process is slow.

Step 4: Formation evaluation - Eastern Colorado - 10, 18, and 28 person days for shallow, intermediate and deep holes, respectively
Western Colorado - 17, 43, and 63 person days for shallow, intermediate and deep holes, respectively

Examination of drill cuttings by the geologist may indicate the presence of hydrocarbons. Well logging also allows for rock properties to be evaluated to determine whether oil and/or gas are present in sufficient quantities to be economic. Drill stem testing allows for measuring down hole formation pressures. In addition, fluids can be sampled and analyzed. This test procedure also adds additional time to the drilling process.

PHASE II - PRODUCTION

Step 5: Setting production casing - Eastern Colorado - 3 person days
Western Colorado - 3 person days

Depending on the outcome of the various tests run in the well, the company decides whether to set casing or plug the well. If hydrocarbons are not present, or are in uneconomic quantities, the well is plugged and abandoned.

If these hydrocarbons are thought to be present in economic quantities, production casing will be set. Pipe is hauled to the location and tested. Before running casing in the hole, a final run into

the hole is undertaken. This allows for a check of possible bridging and settling of cuttings on the bottom. Once the hole is clean, the production casing is carefully made up. This requires a contract casing crew, independent of the drilling crew. The drilling contractor usually moves the rig to the next location after casing has been cemented; however, the rig can remain on site until tubing and placement of the wellhead occur and the well is producing.

Step 6: Completion methods - Eastern Colorado - 3 person days
Western Colorado - 3 person days

Often a smaller rig is moved on location to perform the operations necessary to put the well into production. Three methods are most commonly used to complete a well: open-hole completion, linear completion, and perforated casing completion. Perforated casing is the most commonly used method. Completing a well requires an independent operating crew. Once the well is perforated, it is swabbed and fluids are then allowed to flow to the surface. If the well does not flow after being swabbed, a pump is installed as a permanent lifting device to bring the hydrocarbon fluids to the surface. The well is then tested. These can include a 24 hour production test, a bottom hole pressure test over a 24 to 48 hour period and a productivity test.

Step 7: Well stimulation - Eastern Colorado - 12 person days
Western Colorado - 3 person days

These methods include acid treatment and hydraulic fracturing which allow or expedite the flow of oil and/or gas to the well bore.

Step 8: Well service and workover - Eastern Colorado - 18 person days
Western Colorado - 12 person days

Well servicing is the maintenance work performed on an oil or gas well to improve or maintain the production from a formation already

producing. This requires a well servicing unit and crew. Most commonly the servicing involves work related to artificial lift installations, tubing, sucker rod repair and work on other downhole equipment.

Step 9: Routine maintenance - Eastern Colorado - 2 person days
Western Colorado - 5 person days

This can include replacing worn out pump parts, broken rods, gas-lift devices, repairing tubing leaks, replacing packers and cleaning out the well.

After discussing the person days involved in the various drilling procedures with numerous operators in Colorado, the total number of person days to complete a well can be determined. This information is summarized below:

Average Time Required to Complete Drilling
Oil and/or Gas Wells in Colorado

Depth	Time to Complete (Person Days) Eastern Colorado	Western Colorado
Shallow well (0-5000 feet)	211	280
Intermediate well (5,000-10,000 feet)	347	750
Deep well (greater than 10,000 feet)	517	1,090

The many steps involved in drilling are completed by individual crews. These crews are at one site only until their job is completed. Then, they leave the site. Therefore, crews rotate from site to site. These crews are not restricted to work within one county, basin or state.

ADDITIONAL REQUIREMENTS

In certain geologic situations, alternative methods are required to induce production. Secondary and tertiary recovery methods include water flood, saltwater disposal, high pressure gas drive, enriched gas drive, miscible flooding and thermal processes. The length and number of persons required to complete such jobs vary greatly with the size of the field, type of injection project and preparations required to initiate such projects. Effects of secondary recovery also vary with the type of project and reservoir. Most projects require few additional wells to be drilled; therefore, the effect on employment is slight.

EMPLOYMENT PROJECTION METHODOLOGY

The Colorado Geological Survey has prepared estimates of oil and gas reserves for the major oil producing counties of Colorado. These open file reports contain the methodologies for calculating reserves, actual reserve estimates, county location maps and the field-horizon historical production decline curves. As a general rule, oil and gas fields are older and are becoming rapidly depleted. New discoveries are not being found to replace the reserves that are being produced. Major augmentations to production which could reverse the declining trend include secondary and tertiary production technologies for oil, the production of CO_2 and gas from tight sands. Table I contains the projected decline rates for the oil and gas producing counties in Colorado.

Using the production decline curves and the current best outlooks of the industry, production estimates can be made by county in Colorado. From a random survey of numerous petroleum companies, little change is expected in the number of oil and/or gas wells drilled during the

1980's. Therefore, the amount of drilling will probably be comparable to existing levels. For the years 1990 through 2000, a slight increase in drilling activity is anticipated.

Based on the data, production estimates can be developed. Tables 2, 3, and 4 contain oil production by county in low, intermediate, and high scenarios, respectively. Tables 5, 6, and 7 contain gas production estimates for low, intermediate, and high scenarios, respectively. The low scenario reflects a significant decline in exploration and drilling. The intermediate scenario is based on established trends of the past which are projected to continue assuming no significant changes in demand or technology. The high case reflects a significant increase in exploration and drilling based on market and price changes as well as technology changes.

Inherent in the production decline curves for each field is the "stage of production" of that field. That stage of production is reflected in future production trends. Early Stage includes new production and new significant discoveries. Middle Stage includes production which is beginning to establish consistent decline where new production or new discoveries are not prominent factors. Late Stage includes production which has reached a point where no new drilling or new discoveries have affected the decline for some time.

Drilling activity trends can be applied to the historical data on the number of wells drilled within each county. The number of wells projected to be drilled can be further subdivided into the range of those likely to be oil wells, gas wells or dry holes. Using this approach an estimated employment figure can be obtained.

The numerous steps involved in developing a well described in the previous section are translated to employees using the methodology of appendix I. Sample calculations are also included. The employment estimates for drilling, completing or plugging a well and servicing a well for each producing county in Colorado are contained in Tables 9, 10,

and 11 for the low, intermediate, and high production scenarios, respectively. These estimates are based on employment rates projected by the industry through a delphi process and summarized in Table 8. The employment figures are projected based on 1982 as the base year.

Several other factors can influence employment in this industry and must be considered as updating becomes necessary. These include:

- o newly planned secondary and tertiary recovery projects (OGCC);
- o new significant pay discoveries (OGCC);
- o significant new field discoveries (OGCC);
- o large offerings of state and/or federal leases; and
- o drastic changes in the availability of significant worldwide supply as a result of political or military action.

CONCLUSIONS

The Petroleum Industry can be separated into three basic segments; exploration, production, and refining and marketing. Activity in each is dependent on many variables, i.e., world economics, politics, interest rates, war and supply and demand. Each, to a degree, affects the industry. In Colorado the effect is most directly felt in exploration, while to a lesser extent, in production and refining.

Exploration and its related employment swings with the return on the investment dollar. Higher oil and gas prices means more exploration, while lower oil and gas prices, the converse.

Production of oil will be at a maximum of capacity as long as the United States is crude deficient. In Colorado, due to the age of the major fields and inability to discover more reserves than yearly production, the state will suffer a gradual production decline over the next twenty years.

Gas production shows more variables and directly reflects capacity, weather and prices.

Because of the limited refining capacity in Colorado, this segment of the industry should remain stable or show a slight steady rise due to population and demand increases. This can be tempered by product imports.

In conclusion, unless significant new discoveries are made or CO_2 enhanced recovery projects show great success, crude oil production will show a steady decline regardless of price. Natural gas production will show a steady decline with some fluctuation due to demand based on weather, reserves and imports. Production and refining form a steady employment base while exploration employment will rise and fall with the projected return on investment.

APPENDIX I

EMPLOYMENT PROJECTION METHODOLOGY

The following methodology has been derived by the Colorado Geological Survey to prepare estimates of future employment trends in Colorado's oil and gas industry.

Step 1 - Divide known or estimated number of wells actually producing in each county by 13, which is the average number of producing wells (oil and/or gas) one person can service daily. Multiply this by 365 days (number of days well is serviced each year) to obtain the number of person days (1 year) spent in the county by well service workers.

Example: In Adams County, 1,037 wells were producing as of December 1982. Dividing 1,037 by 13 equals 80, times 365 equals 29,115 person days spent in Adams County by well service workers for 1982.

Equation 1: $\frac{(N)}{13} 365 = Pd_I$

Where, N = number of wells producing in county

Pd_I = number of person days spent in county for well upkeep.

Step 2 - Multiply the known or estimated number of wells drilled annually in county by the person days required to complete Phase I drilling procedures. This results in the number of person days spent in the county to complete Phase I drilling procedures.

Example: In Adams County 290 wells were drilled in 1982, times 306 (number of person days required to complete intermediate Phase I

procedures) equals 88,740 person days spent in Adams County to complete Phase I drilling procedures.

Equation II: $N \times P_1 = Pd_2$

Where: N = number of wells drilled in said county
P_1 = number of person days required to complete Phase I procedures
Pd_2 = number of person days spent in county to complete Phase I procedures

Step 3 - Multiply the known or estimated number of wells drilled annually in county by the average success ratio calculated for each county. The average success ratio is determined by calculating the percent chance of drilling a producing well. These are calculated for the past six years and then averaged. For example, if 100 wells were drilled in Adams County and 40 were classified as oil wells, 20 as gas wells, and 40 were dry holes, there is a 60 percent chance of drilling a producing well and a 40 percent chance of drilling a dry hole. Multiply this number by the person days required to complete Phase II drilling procedures.

Example: In Adams County, 290 wells were drilled in 1982. The average historical success ratio in Adams County is 52 percent oil, 11 percent gas, and 33 percent dry holes. Therefore, a 63 percent chance of drilling an economically successful well or 183 of the 290 wells drilled are completed. Multiplying 183 times 41 (the number of person days required to complete Phase II procedures) equals 7,503 person days spent in Adams County to complete Phase II drilling procedures.

Equation III: $(N \times SR) \times P_2 = Pd_3$

Where, N = as above

SR = average success ratio

P_2 = person days required to complete Phase II procedures

Pd_3 = person days spent in county to complete Phase II procedures

Step 4 - Total all the person days calculated in Step I through Step III. This is the total person days spent in the county per year. This number is then divided by the average number of days each person works per year, which is estimated to be 230 (based on an average of 46 working weeks). This results in the number of workers spending one working year in the county.

Example: Step I required 29,115 person days, Step II required 88,740 person days, and Step III required 7,490 person days, totalling 125,346 person days spent in Adams County in 1982. Divide 230 into 125,346 to obtain 545 persons spending one working year in Adams County in 1982.

Equation IV: $Pd_1 + Pd_2 + Pd_3 = Pd$

Where, Pd_1, Pd_2, Pd_3 = as above.

Pd = total person days spent in county to upkeep, drill, and complete wells.

$$\frac{Pd}{230} = W$$

Where: W = number of workers spending on working year in county.

Where Pd = as above.

Step 5 - The final significant employment factor to consider is the seismic industry. All seismic data records are kept on a statewide basis. They cannot be divided between the counties based on any known relationships. During 1983, there were three main areas in Colorado where seismic crews were active: Craig (Moffat County), Durango/Cortez (Montezuma/La Plata Counties), and Kit Carson/Limon (Lincoln/Kit Carson Counties).

One approach is to assign seismic employees by Eastern Colorado and Western Colorado, rather than by county. The average crew size in Colorado is 25 persons. The average job run lasted between three and nine months. A good job, start to finish, is considered to be 200 line miles, but the average job is 50-150 line miles. In 1982/1983, 6,632 and 7,138 line miles were run in Colorado, respectively. These totalled 141 and 176 crew months (one crew or 25 people working one month), respectively. This equates to 460 persons (in 1982) and 574 persons (in 1983), working for one month in Colorado; where the average crew size is 25 persons, a crew month is 25 persons working one month (30 days) or 750 person days per crew. Multiply this estimate by the number of crew months and divide by 230 (average number of days worked in one year) to obtain the number of people required to do the job. It will be arbitrarily assumed that two-thirds of these persons worked in Western Colorado and one-third in Eastern Colorado. It will also be arbitrarily assumed that one-half of the two-thirds work force in Western Colorado are located in Moffat County, and the remainder in Montezuma and La Plata Counties. This results in additional employment of 153 persons in Moffat County and 153 persons in Montezuma and La Plata Counties. The one-third for Eastern Colorado are located in Lincoln and Kit Carson Counties, resulting in additional employment of 153 persons.

It is most common in the petroleum industry to regard seismic exploration with utmost secrecy. While polling the numerous companies, none would reveal or indicate what direction the seismic industry would

take in Colorado. These circumstances do not therefore allow for this employment factor to be incorporated into the employment projections presented in this report. This factor must be considered independently each year (by polling the various seismic companies) and added into those projected figures in Table II.

6285

APPENDIX I

Glossary of Oilfield Terminology

Artificial Lift - when a mechanical pumping device is installed at the well head to forcibly bring hydrocarbons to the surface.

Associated Gas - natural gas that occurs in association with oil in a reservoir.

Bridging - a large rock fragment or fragments or other obstruction that has fallen & lodged part way down in a drill hole.

Cement - to cement or secure casing into place so it does not slip down hole over another interval; a liquid slurry of cement is pumped through a valve at the top of the casing to the bottom, pressure forces it out the bottom and up between the wall of the well bore and the outside of the casing.

Crew/Month - a party of persons (around 25) working one month on a geophysical (usually seismic) crew.

Drill Cores - a cylindrical column or piece of solid rock or section of soil taken as a sample of an underground formation by a special hollow-type drill bit and brought to the surface for analysis.

Drill Cuttings - rock chips or fragments produced by drilling and brought to the surface.

Down Hole - below the ground surface within the well bore.

Drill Pipe - a long heavy, steel pipe or hollow rod that drives the motion from the rotary table at the surface to the attached bit at the bottom of the hole. The drill pipe, also conducts the drilling mud from the surface to the bottom.

Drill Stem - a term used for drill pipe or drill string.

Frac - to mechanically or physically create fractures within a specified interval to encourage or facilitate the flow of fluids to the well bore.

Line Mile - a unit of measure for geophysical work such as indicating continuous coverage over one mile of seismic line.

Open Hole - a well or borehole or portion thereof, that has not been cased at the depth referred to.

Packer - a device used in boreholes to block or pack off a specified interval so that fluids from other intervals will not flow to the surface.

Perforate - to puncture the well casing opposite an oil or gas-bearing zone to permit oil or gas to flow into the well bore.

Plug - the act or process of stopping the flow of water, oil or gas in stratum penetrated by a borehole so that fluid from one stratum will not escape into another or to the surface.

Production casing - steel pipe used specifically to cover the interval to be perforated and to keep the hole open for production tubing and pumping apparatus.

Reserves - hydrocarbon discovered, developed and producible, but not yet produced.

Reservoir - beds in which oil and or gas accumulates.

Round Trip - the process of pulling drill pipe out of the hole to change bits or perform other operations then running drill pipe back into the well bore to resume drilling.

Run Casing - to place the large-diameter steel pipe into the hole to prevent the walls of the well from caving in.

Secondary Recovery - recovery obtained by any method whereby oil or gas is produced by augmenting the natural reservoir energy.

String - a set of well-drilling tools, pipe and drilling equipment used in drilling.

Surface Casing - large-diameter steel pipe set at the top of the well bore, usually several hundred feet.

Swabbed - a temporary operation that lowers the fluid level in the well so that it can begin to produce; lifting fluids out of the borehole.

Tertiary Recovery - methods used to increase ultimate oil production beyond that achievable with primary and secondary methods by increasing the proportion of the reservoir affected, reducing the amount of residual oil in the formation, and reducing the viscosity of thick oils; also known as enhanced oil recovery.

Trip (Tripped) Out - pull the whole drill stem and bit out of the hole, allows for changing bits, running samples, or other operations in the borehole.

Tubing - nearly always freely suspended pipe or tubing in the well from the casing head, allows fluids to flow or be pumped from specified interval to surface.

Well Head - the surface equipment attached to the well bore, used to maintain surface control of the well fluids and pressures.

Well Logging - the use of geophysical measurements from instruments lowered down boreholes to obtain physical or engineering data about the rocks below the surface.

APPENDIX II

Employment Projections Contacts

Contacts made for Employment Projections

Petroleum Information
Denver, Colorado
740-7100
Ms. Kim Strawberry Merret or Bob Mole

Drilling Records, Inc.
Denver, Colorado
694-3636
Mr. Alan Richards

Society Engineering Geophysicists
Tulsa, Oklahoma
918-743-1365
Ms. Sally Shank

Hughes Tool
Houston, Texas
713-924-2764
Shirley

Davis Mud
Casper, Wy
307-237-2581
Mr. Bob Valerios or Mr. Keith Stetson

N.L. Baroid
Denver, Colorado
278-2833

Magcobar
Denver, Colorado
293-0500

Drilling Mud, Inc.
Denver, Colorado
831-0901

Service Mud
Denver, Colorado
450-8036

Dresser Atlas
Denver, Colorado
293-0600

N.L. McCullough
Denver, Colorado
278-3822

Copeland Supply Co.
Grand Junction, Colorado
245-2695

Halliburton Service
Denver, Colorado
893-8969
Shelly

Western Company
Denver, Colorado
831-7878

Seismograph Service Company
Denver, Colorado
861-4476
Lynell

Norpac Seismograph Service
Denver, Colorado
694-3666
Mr. Elton Rozell

Geophysical Services Inc.
Denver, Colorado
455-2783
Ms. Marion Sukora

Sampson Resources
Denver, Colorado
292-4127
Mr. Norm Hoag

Ladd Petroleum
Denver, Colorado
620-0110
Ms. Pat George

Mr. Mark Haefele
Amoco Production
Denver, Colorado
371-2480

Schlumberger
Denver, Colorado
292-5207

Chevron, U.S.A.
Denver, Colorado
691-7000
Mr. Stan Walker

Division Employment & Labor
Denver, Colorado
866-6329
Mr. Al Rose or Mr. Ken Anderson

Coors Energy
Golden, Colorado
278-7030
Mr. Bob Martin

Amoco
Denver, Colorado
830-4040
Mr. Ray Gilley

Independent Petroleum Association
of America
Washington, D.C.
202-857-4760

APPENDIX III

List of References

List of References

Colorado Division of Employment and Training, 1983, Occupational Employment Outlook 1983-1988, Research and Development Section, Occupational Employment Statistics Unit, 282 p.

Colorado Division of Employment and Training, 1984, Occupational Employment Outlook 1983-1988: Western Area, Occupational Employment Statistics Unit, 100 p.

Energy Information Administration, Annual Energy Outlook 1983: With projections to 1995, 1984, DOE-EIA-0383 (83), Washington, D.C. 301 p.

Fundamentals of Petroleum, Second Edition, 1981, Petroleum Extension Service, The University of Texas at Austin, Austin, Texas.

Table 1
Projected Production Decline Rates

County	Low		Intermediate		High	
	Oil	Gas	Oil	Gas	Oil	Gas
Adams	6.0	10.0	7.9	12.1	8.5	13
Arapahoe	12.0	14.0	15.0	16.7	16	17.5
Archuleta	3.0	5.0	5.0	5.4	6.0	7.0
Baca	4.5	12	5.6	15.6	6.5	18.0
Bent	11	13	13.5	15.2	15	16.5
Boulder	7	7	10	10	13	13
Cheyenne	7.5	6.0	8.2	7.4	12	10
Delta	PRODUCTION IS INSIGNIFICANT					
Dolores	13.5	5.0	14.8	6.3	15.5	8
Elbert	14	10	19.8	13.7	22	16
Fremont	3	--	4.7	--	7	--
Garfield	12	10	15.7	12.5	18	16
Huerfano	10	10	12.5	12.0	16	16
Jackson	6.5	4.5	7.8	5.4	10	7
Jefferson	NO RECENT PRODUCTION					
Kiowa	5.5	4.0	6.8	6.0	7.5	8.0
Kit Carson	12	+10 (for 4 yrs) -15 (for 13 yrs)	14.0 short period		16	25
La Plata	3.0	2.5	4.4	3.1	6.0	4.5
Larimer	10	13	11.8	14.6	14	16
Las Animas	NO RECENT PRODUCTION					
Lincoln	SHORT PRODUCTION HISTORY					
Logan	4	4	5.4	5.4	7	7
Mesa	10	5.0	11.4	6.1	12.5	7.0
Moffat	6.0	5.5	6.9	6.3	7.5	7.0
Montezuma	3.0	9.5	4.0	10.9	5.0	12.0
Montrose	NO RECENT PRODUCTION					
Morgan	4.5	4.5	5.1	5.2	6.0	6.0
Phillips	--	15.0	--	18.0	--	20.0
Pitkin	NO RECENT PRODUCTION					
Prowers	14	10	16.0	12.0	18	14
Rio Blanco	7.0	6.0	7.0	6.8	7.0	7.5
Routt	7.0	6.0	7.4	6.5	9.0	8.0
San Miguel	4.0	3.5	5.0	4.2	6.0	5.5
Sedgwick	--	7.0	--	7.6	--	8.5
Washington	4.0	3.0	4.7	5.0	5.5	7.0
Weld	13	11	15.3	13.4	17.5	15.5
Yuma	--	8.0	--	8.9	--	11.0

LOW RATES are based on significant influences from new discoveries, higher oil/gas price effect (therefore an increase in drilling, therefore a higher probability of finding new production, hence decline rate lowers), effects of secondary recovery.

INTERMEDIATE RATES are based on past production trends; these values are most accurate.

HIGH RATES are based on significant influences from use increase (severe weather), low price for oil/gas, severe federal tax increases international crisis.

1	2	3	4	5	6	7	8	9	10	11
					TABLE 2					
					OIL PRODUCTION BY COUNTY					
					1960-2000					
					LOW CASE					
OIL STATISTICS BY COUNTY : Low Case										
	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
COUNTY	OIL(BBLS)	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
ADAMS	941,834	909,188	607,988	478,045	492,183	600,561	434,002	390,650	442,762	552,617
ARAPAHOE								252,899	357,576	220,116
ARCHULETA	102,712	88,864	79,859	79,236	70,387	67,637	63,643	59,781	54,686	51,156
BACA		33,543	204,501	262,368	197,028	165,743	120,598	96,973	71,233	74,708
BENT	7,777	509	1,336	2,117	5,727	2,010	1,072	2,072	906	798
BOULDER	2,404	2,574	2,596	2,284	1,994	2,304	1,997	1,588	1,513	875
CHEYENNE									8,599	416,847
DELTA										
DOLORES										
ELBERT										6,739
FREMONT	27,324	28,471	29,041	26,287	24,010	20,586	19,856	21,205	23,248	24,877
GARFIELD								105	173	165
HUERFANO										
JACKSON	852,985	591,158	550,930	462,652	354,767	302,789	273,575	229,484	198,292	178,691
JEFFERSON										
KIOWA	7,719	9,646	14,426	11,297	15,624	27,351	205,317	771,361	1,014,657	1,101,127
KIT CARSON										
LA PLATA	24,125	42,198	56,976	58,037	43,167	30,487	22,935	24,405	24,074	22,510
LARIMER	191,943	187,047	183,764	274,222	391,818	302,103	366,150	409,613	329,161	261,184
LAS ANIMAS										
LINCOLN										
LOGAN	4,582,903	4,453,276	4,611,693	4,190,691	3,495,586	3,510,117	3,414,973	2,885,067	2,418,355	2,399,370
MESA										
MOFFAT	1,822,006	1,417,791	995,059	1,296,180	854,615	807,689	931,379	1,939,913	2,199,880	1,636,508
MONTEZUMA	79,964	106,858	231,500	367,101	512,931	1,309,434	824,619	529,165	436,202	317,192
MONTROSE										
MORGAN	9,300,584	8,949,620	5,525,159	3,387,108	2,283,008	1,487,552	1,325,614	1,802,495	1,344,845	946,954
PHILLIPS										
PITKIN										
PROWERS	1,520	877	77		4,115	3,418		5,004	606	1,280
RIO BLANCO	19,811,099	19,009,568	18,531,981	18,319,910	18,109,360	17,740,307	19,272,974	19,006,129	17,203,903	14,427,990
ROUTT	106,980	144,911	132,257	92,394	80,852	93,728	100,848	99,084	88,733	85,451
SAN MIGUEL				1,537					1,728	3,273
SEDGWICK										
WASHINGTON	8,032,673	9,288,140	8,980,912	7,168,757	6,223,849	5,381,404	4,553,470	4,137,000	4,080,952	4,389,067
WELD	1,583,812	1,491,962	1,731,564	1,789,741	1,592,531	1,639,372	1,555,283	1,240,622	1,608,245	1,166,575
YUMA	2,168	2,775	1,384			2,605	3,544	633		
TOTAL	47,482,571	46,758,976	42,473,013	38,269,964	34,753,542	33,497,197	33,491,849	33,905,248	31,937,399	28,286,070

Note: Production estimates after 1982 are projections by the Colorado Geological Survey.

	12	13	14	15	16	17	18	19	20	21	22
1											
2											
3											
4											
5											
6											
7	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
8	OIL(BBLS)	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL(BBLS)
9	1,229,340	1,352,813	2,774,811	2,044,504	2,583,501	2,716,818	2,272,190	1,847,219	1,625,690	1,662,323	1,911,209
10	615,132	3,197,403	3,248,625	2,901,387	2,131,475	1,725,377	1,458,535	1,131,732	740,218	554,934	499,983
11	49,166	53,784	56,568	49,373	50,731	49,110	45,211	44,744	50,134	64,814	73,517
12	61,294	59,047	51,362	59,903	45,072	41,750	39,256	40,478	31,911	31,133	47,181
13	290	371	13,178	14,426	12,384	9,196	18,312	18,938	16,295	16,548	11,172
14	1,103	614	776	1,165	1,321	1,676	1,496	1,609	1,476	4,806	7,862
15	614,265	403,129	484,680	503,557	442,370	499,434	507,768	446,848	491,452	435,999	758,267
16											
17		9	138852	364817	313054	237666	163284	119181	90492	73067	61781
18	18,685	77,973	144,351	89,170	61,547	69,589	99,302	188,503	512,595	385,702	281,954
19	21,339	20,986	20,824	19,229	19,041	20,293	20,110	20,505	21,981	28,147	29,106
20								44	398	3,478	4,223
21					329	805	424	289	273	217	262
22	167,716	153,725	347,445	423,941	493,984	452,029	389,476	338,367	331,995	301,686	275,389
23											
24	1,096,308	1,265,688	1,066,652	726,524	600,899	543,057	455,113	449,262	379,970	335,307	302,299
25		4973	4006	6792	4675	9120	6462	3932	2125	1833	745
26	23,415	21,313	25,784	20,346	21,065	25,825	35,848	46,925	46,348	52,322	68,446
27	211,164	166,049	119,380	86,321	110,403	166,412	208,241	256,200	235,117	239,506	232,845
28											
29							221				
30	2,093,740	1,703,003	1,461,500	1,418,128	1,218,865	1,109,763	1,029,694	903,915	818,465	729,089	696,958
31					3,284	10,186	3,176	1,597	999	1,499	822
32	1,149,175	974,268	910,501	1,036,337	906,680	791,107	731,512	608,229	561,459	476,461	457,131
33	256,886	261,499	221,780	224,826	219,041	232,236	199,087	175,234	171,179	165,810	150,994
34								392,223			
35	715,097	629,320	643,641	498,772	419,494	507,314	444,040		378,213	369,906	370,968
36											
37											
38	3,916	3,282	3,717	1,990	1,382	14,406	16,570	9,350	14,128	37,605	17,128
39	11,540,300	12,518,262	15,775,513	20,779,546	21,627,533	21,555,616	21,925,268	21,981,024	21,742,980	19,549,533	17,878,737
40	80,031	77,497	71,360	64,574	59,432	84,683	154,320	172,343	161,263	160,337	148,062
41	2,015	11,233	24,872	18,760	12,518	11,012	9,010	12,538	15,640	11,473	6,503
42											
43	3,761,464	3,358,755	3,030,675	2,544,837	2,435,219	2,305,265	2,271,550	2,070,811	1,860,640	1,618,432	1,535,073
44	1,006,097	1,078,808	1,377,925	2,692,977	3,712,780	4,889,257	6,528,019	8,177,318	6,493,372	5,009,756	3,972,907
45											
46	24,719,014	27,393,832	32,018,978	36,592,202	37,508,079	38,078,388	39,033,495	39,459,358	36,783,111	32,325,078	29,801,524

	23	24	25	26	27	28	29	30	31	32
1										
2										
3										
4										
5										
6										
7	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
8	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	3,111,509	3,300,077	3,102,072	2,915,948	2,740,991	2,576,532	2,421,940	2,276,623	2,140,026	2,011,624
10	804,482	767,244	675,175	594,154	522,855	460,113	404,899	356,311	313,554	275,927
11	108,603	73,381	71,180	69,044	66,973	64,964	63,015	61,124	59,291	57,512
12	66,285	63,328	60,478	57,757	55,158	52,676	50,305	48,041	45,880	43,815
13	6,840	7,506	6,680	5,946	5,291	4,709	4,191	3,730	3,320	2,955
14	23,576	23,203	21,579	20,068	18,663	17,357	16,142	15,012	13,961	12,984
15	1,343,446	1,465,017	1,355,141	1,253,505	1,159,492	1,072,530	992,091	917,684	848,858	785,193
16	175									
17	113025	193669	167,524	144,908	125,345	108,424	93,787	81,125	70,173	60,700
18	498,149	477,429	410,589	353,106	303,672	261,158	224,596	193,152	166,111	142,855
19	27,933	27,086	26,273	25,485	24,721	23,979	23,260	22,562	21,885	21,228
20	9,033	6,215	5,469	4,813	4,235	3,727	3,280	2,886	2,540	2,235
21	281	346	311	280	252	227	204	184	165	149
22	224,512	325,006	303,881	284,128	265,660	248,392	232,247	217,151	203,036	189,838
23										
24	319,148	337,585	319,018	301,472	284,891	269,222	254,415	240,422	227,199	214,703
25	1007	174	153	135	119	104	92	81	71	63
26	71,941	100,603	97,585	94,657	91,818	89,063	86,391	83,799	81,285	78,847
27	238,548	256,730	231,057	207,951	187,156	168,441	151,596	136,437	122,793	110,514
28										
29	773	55551								
30	719,272	670,853	644,019	618,258	593,528	569,787	546,995	525,115	504,111	483,946
31	10,389	6,680	6,012	5,411	4,870	4,383	3,944	3,550	3,195	2,876
32	470,040	466,988	438,969	412,631	387,873	364,600	342,724	322,161	302,831	284,661
33	143,330	132,681	128,701	124,840	121,094	117,462	113,938	110,520	107,204	103,988
34										
35	399,211	428,485	409,203	390,789	373,204	356,409	340,371	325,054	310,427	296,458
36										
37										
38	24,136	37,123	31,926	27,456	23,612	20,307	17,464	15,019	12,916	11,108
39	15,947,577	15,545,420	14,457,241	13,445,234	12,504,067	11,628,783	10,814,768	10,057,734	9,353,693	8,698,934
40	171,059	249,611	232,138	215,889	200,776	186,722	173,651	161,496	150,191	139,678
41	7,931	7,470	7,171	6,884	6,609	6,345	6,091	5,847	5,613	5,389
42		7,218								
43	1,506,326	1,686,968	1,619,489	1,554,710	1,492,521	1,432,820	1,375,508	1,320,487	1,267,668	1,216,961
44	4,040,101	4,068,451	3,539,552	3,079,411	2,679,087	2,330,806	2,027,801	1,764,187	1,534,843	1,335,313
45		191								
46	30,408,638	30,788,289	28,368,586	26,214,869	24,244,535	22,440,040	20,785,705	19,267,496	17,872,840	16,590,455

	33	34	35	36	37	38	39	40	41	42
1										
2										
3										
4										
5										
6										
7	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
8	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	1,890,927	1,777,471	1,670,823	1,570,574	1,476,339	1,387,759	1,304,493	1,226,224	1,152,650	1,083,491
10	242,816	213,678	188,037	165,472	145,616	128,142	112,765	99,233	87,325	76,846
11	55,787	54,113	52,490	50,915	49,387	47,906	46,469	45,075	43,722	42,411
12	41,843	39,960	38,162	36,445	34,805	33,239	31,743	30,314	28,950	27,648
13	2,630	2,340	2,083	1,854	1,650	1,468	1,307	1,163	1,035	921
14	12,075	11,230	10,444	9,713	9,033	8,401	7,812	7,266	6,757	6,284
15	726,304	671,831	621,444	574,835	531,723	491,843	454,955	420,834	389,271	360,076
16										
17	52,506	45,417	39,286	33,982	29,395	25,426	21,994	19,025	16,456	14,235
18	122,856	105,656	90,864	78,143	67,203	57,795	49,703	42,745	36,761	31,614
19	20,592	19,974	19,375	18,793	18,230	17,683	17,152	16,638	16,139	15,654
20	1,967	1,731	1,523	1,340	1,180	1,038	913	804	707	622
21	134	121	109	98	88	79	71	64	58	52
22	177,499	165,962	155,174	145,088	135,657	126,839	118,595	110,886	103,679	96,939
23										
24	202,894	191,735	181,190	171,224	161,807	152,907	144,497	136,550	129,040	121,943
25	55	48	43	38	33	29	26	23	20	17
26	76,482	74,187	71,961	69,803	67,709	65,677	63,707	61,796	59,942	58,144
27	99,462	89,516	80,565	72,508	65,257	58,732	52,858	47,573	42,815	38,534
28										
29										
30	464,589	446,005	428,165	411,038	394,597	378,813	363,660	349,114	335,149	321,743
31	2,588	2,329	2,096	1,887	1,698	1,528	1,375	1,238	1,114	1,003
32	267,582	251,527	236,435	222,249	208,914	196,379	184,597	173,521	163,109	153,323
33	100,868	97,842	94,907	92,060	89,298	86,619	84,020	81,500	79,055	76,683
34										
35	283,117	270,377	258,210	246,590	235,494	224,897	214,776	205,111	195,881	187,067
36										
37										
38	9,553	8,215	7,065	6,076	5,225	4,494	3,865	3,324	2,858	2,458
39	8,090,009	7,523,708	6,997,049	6,507,255	6,051,747	5,628,125	5,234,156	4,867,765	4,527,022	4,210,130
40	129,900	120,807	112,351	104,486	97,172	90,370	84,044	78,161	72,690	67,602
41	5,173	4,966	4,768	4,577	4,394	4,218	4,049	3,887	3,732	3,583
42										
43	1,168,283	1,121,551	1,076,689	1,033,622	992,277	952,586	914,482	877,903	842,787	809,075
44	1,161,722	1,010,698	879,308	764,998	665,548	579,027	503,753	438,265	381,291	331,723
45										
46	15,410,211	14,322,998	13,320,613	12,395,663	11,541,474	10,752,019	10,021,841	9,346,000	8,720,016	8,139,821

1	2	3	4	5	6	7	8	9	10	11

TABLE 3
OIL PRODUCTION BY COUNTY
1960-2000
INTERMEDIATE CASE

OIL STATISTICS BY COUNTY : Intermediate Case

COUNTY	1960 OIL(BBLS)	1961 OIL(BBLS)	1962 OIL (BBLS)	1963 OIL (BBLS)	1964 OIL (BBLS)	1965 OIL (BBLS)	1966 OIL (BBLS)	1967 OIL (BBLS)	1968 OIL (BBLS)	1969 OIL (BBLS)
ADAMS	941,834	909,188	607,988	478,045	492,183	600,561	434,002	390,650	442,762	552,617
ARAPAHOE								252,899	357,576	220,116
ARCHULETA	102,712	88,864	79,859	79,236	70,387	67,637	63,643	59,781	54,686	51,156
BACA		33,543	204,501	262,368	197,028	165,743	120,598	96,973	71,233	74,708
BENT	7,777	509	1,336	2,117	5,727	2,010	1,072	2,072	906	798
BOULDER	2,404	2,574	2,596	2,284	1,994	2,304	1,997	1,588	1,513	875
CHEYENNE									8,599	416,847
DELTA										
DOLORES										
ELBERT										6,739
FREMONT	27,324	28,471	29,041	26,287	24,010	20,586	19,856	21,205	23,248	24,877
GARFIELD								105	173	165
HUERFANO										
JACKSON	852,985	591,158	550,930	462,652	354,767	302,789	273,575	229,484	198,292	178,691
JEFFERSON										
KIOWA	7,719	9,646	14,426	11,297	15,624	27,351	205,317	771,361	1,014,657	1,101,127
KIT CARSON										
LA PLATA	24,125	42,198	56,976	58,037	43,167	30,487	22,935	24,405	24,074	22,510
LARIMER	191,943	187,047	183,764	274,222	391,818	302,103	366,150	409,613	329,161	261,184
LAS ANIMAS										
LINCOLN										
LOGAN	4,582,903	4,453,276	4,611,693	4,190,691	3,495,586	3,510,117	3,414,973	2,885,067	2,418,355	2,399,370
MESA										
MOFFAT	1,822,006	1,417,791	995,059	1,296,180	854,615	807,689	931,379	1,939,913	2,199,880	1,636,508
MONTEZUMA	79,964	106,858	231,500	367,101	512,931	1,309,434	824,619	529,165	436,202	317,192
MONTROSE										
MORGAN	9,300,584	8,949,620	5,525,159	3,387,108	2,283,008	1,487,552	1,325,614	1,802,495	1,344,845	946,954
PHILLIPS										
PITKIN										
PROWERS	1,520	877	77		4,115	3,418		5,004	606	1,280
RIO BLANCO	19,811,099	19,009,568	18,531,981	18,319,910	18,109,360	17,740,307	19,272,974	19,006,129	17,203,903	14,427,990
ROUTT	106,980	144,911	132,257	92,394	80,852	93,728	100,848	99,084	88,733	85,451
SAN MIGUEL				1,537					1,728	3,273
SEDGWICK										
WASHINGTON	8,032,673	9,288,140	8,980,912	7,168,757	6,223,849	5,381,404	4,553,470	4,137,000	4,080,952	4,389,067
WELD	1,583,812	1,491,962	1,731,564	1,789,741	1,592,531	1,639,372	1,555,283	1,240,622	1,608,245	1,166,575
YUMA	2,168	2,775	1,384			2,605	3,544	633		
TOTAL	47,482,571	46,758,976	42,473,013	38,269,964	34,753,542	33,497,197	33,491,849	33,905,248	31,937,399	28,286,070

Note: Production estimates after 1982 are projections by the Colorado Geological Survey.

	12	13	14	15	16	17	18	19	20	21	22
1											
2											
3											
4											
5											
6											
7	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
8	OIL(BBLS)	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL(BBLS)
9	1,229,340	1,352,813	2,774,811	2,044,504	2,583,501	2,716,818	2,272,190	1,847,219	1,625,690	1,662,323	1,911,209
10	615,132	3,197,403	3,248,625	2,901,387	2,131,475	1,725,377	1,458,535	1,131,732	740,218	554,934	499,983
11	49,166	53,784	56,568	49,373	50,731	49,110	45,211	44,744	50,134	64,814	73,517
12	61,294	59,047	51,362	59,903	45,072	41,750	39,256	40,478	31,911	31,133	47,181
13	290	371	13,178	14,426	12,384	9,196	18,312	18,938	16,295	16,548	11,172
14	1,103	614	776	1,165	1,321	1,676	1,496	1,609	1,476	4,806	7,862
15	614,265	403,129	484,680	503,557	442,370	499,434	507,768	446,848	491,452	435,999	758,267
16											
17		9	138852	364817	313054	237666	163284	119181	90492	73067	61781
18	18,685	77,973	144,351	89,170	61,547	69,589	99,302	188,503	512,595	385,702	281,954
19	21,339	20,986	20,824	19,229	19,041	20,293	20,110	20,505	21,981	28,147	29,106
20								44	398	3,478	4,223
21					329	805	424	289	273	217	262
22	167,716	153,725	347,445	423,941	493,984	452,029	389,476	338,367	331,995	301,686	275,389
23											
24	1,096,308	1,265,688	1,066,652	726,524	600,899	543,057	455,113	449,262	379,970	335,307	302,299
25		4973	4006	6792	4675	9120	6462	3932	2125	1833	745
26	23,415	21,313	25,784	20,346	21,065	25,825	35,848	46,925	46,348	52,322	68,446
27	211,164	166,049	119,380	86,321	110,403	166,412	208,241	256,200	235,117	239,506	232,845
28											
29							221				
30	2,093,740	1,703,003	1,461,500	1,418,128	1,218,865	1,109,763	1,029,694	903,915	818,465	729,089	696,958
31					3,284	10,186	3,176	1,597	999	1,499	822
32	1,149,175	974,268	910,501	1,036,337	906,680	791,107	731,512	608,229	561,459	476,461	457,131
33	256,886	261,499	221,780	224,826	219,041	232,236	199,087	175,234	171,179	165,810	150,994
34								392,223			
35	715,097	629,320	643,641	498,772	419,494	507,314	444,040		378,213	369,906	370,968
36											
37											
38	3,916	3,282	3,717	1,990	1,382	14,406	16,570	9,350	14,128	37,605	17,128
39	11,540,300	12,518,262	15,775,513	20,779,546	21,627,533	21,555,616	21,925,268	21,981,024	21,742,980	19,549,533	17,878,737
40	80,031	77,497	71,360	64,574	59,432	84,683	154,320	172,343	161,263	160,337	148,062
41	2,015	11,233	24,872	18,760	12,518	11,012	9,010	12,538	15,640	11,473	6,503
42											
43	3,761,464	3,358,755	3,030,675	2,544,837	2,435,219	2,305,265	2,271,550	2,070,811	1,860,640	1,618,432	1,535,073
44	1,006,097	1,078,808	1,377,925	2,692,977	3,712,780	4,889,257	6,528,019	8,177,318	6,493,372	5,009,756	3,972,907
45											
46	24,719,014	27,393,832	32,018,978	36,592,202	37,508,079	38,078,388	39,033,495	39,459,358	36,783,111	32,325,078	29,801,524

	23	24	25	26	27	28	29	30	31	32
1										
2										
3										
4										
5										
6										
7	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
8	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	3,111,509	3,300,077	3,039,371	2,799,261	2,578,119	2,374,448	2,186,866	2,014,104	1,854,990	1,708,445
10	804,482	767,244	652,157	554,334	471,184	400,506	340,430	289,366	245,961	209,067
11	108,603	73,381	69,712	66,226	62,915	59,769	56,781	53,942	51,245	48,682
12	66,285	63,328	59,782	56,434	53,274	50,290	47,474	44,815	42,306	39,937
13	6,840	7,506	6,493	5,616	4,858	4,202	3,635	3,144	2,720	2,353
14	23,576	23,203	20,883	18,794	16,915	15,223	13,701	12,331	11,098	9,988
15	1,343,446	1,465,017	1,344,886	1,234,605	1,133,367	1,040,431	955,116	876,796	804,899	738,897
16	175									
17	113025	193669	165,006	140,585	119,779	102,051	86,948	74,079	63,116	53,775
18	498,149	477,429	382,898	307,084	246,282	197,518	158,409	127,044	101,889	81,715
19	27,933	27,086	25,813	24,600	23,444	22,342	21,292	20,291	19,337	18,428
20	9,033	6,215	5,239	4,417	3,723	3,139	2,646	2,231	1,880	1,585
21	281	346	303	265	232	203	177	155	136	119
22	224,512	325,006	299,656	276,282	254,732	234,863	216,544	199,653	184,081	169,722
23										
24	319,148	337,585	314,629	293,234	273,294	254,710	237,390	221,248	206,203	192,181
25	1007	174	150	129	111	95	82	70	61	52
26	71,941	100,603	96,176	91,945	87,899	84,032	80,334	76,799	73,420	70,190
27	238,548	256,730	226,436	199,716	176,150	155,364	137,031	120,862	106,600	94,021
28										
29	773	55551								
30	719,272	670,853	634,627	600,357	567,938	537,269	508,257	480,811	454,847	430,285
31	10,389	6,680	5,918	5,244	4,646	4,116	3,647	3,231	2,863	2,537
32	470,040	466,988	434,766	404,767	376,838	350,836	326,629	304,091	283,109	263,574
33	143,330	132,681	127,374	122,279	117,388	112,692	108,184	103,857	99,703	95,715
34										
35	399,211	428,485	406,632	385,894	366,213	347,537	329,812	312,992	297,029	281,881
36										
37										
38	24,136	37,123	31,183	26,194	22,003	18,482	15,525	13,041	10,955	9,202
39	15,947,577	15,545,420	14,457,241	13,445,234	12,504,067	11,628,783	10,814,768	10,057,734	9,353,693	8,698,934
40	171,059	249,611	231,140	214,035	198,197	183,530	169,949	157,373	145,727	134,943
41	7,931	7,470	7,097	6,742	6,405	6,084	5,780	5,491	5,217	4,956
42		7,218								
43	1,506,326	1,686,968	1,607,681	1,532,120	1,460,110	1,391,485	1,326,085	1,263,759	1,204,362	1,147,757
44	4,040,101	4,068,451	3,445,978	2,918,743	2,472,176	2,093,933	1,773,561	1,502,206	1,272,369	1,077,696
45		191								
46	30,408,638	30,788,289	28,099,225	25,735,136	23,602,257	21,673,935	19,927,054	18,341,518	16,899,813	15,586,638

	33	34	35	36	37	38	39	40	41	42
1										
2										
3										
4										
5										
6										
7	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
8	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	1,573,478	1,449,173	1,334,689	1,229,248	1,132,138	1,042,699	960,326	884,460	814,588	750,235
10	177,707	151,051	128,393	109,134	92,764	78,849	67,022	56,969	48,423	41,160
11	46,248	43,936	41,739	39,652	37,670	35,786	33,997	32,297	30,682	29,148
12	37,700	35,589	33,596	31,715	29,939	28,262	26,679	25,185	23,775	22,444
13	2,035	1,760	1,523	1,317	1,139	985	852	737	638	552
14	8,989	8,090	7,281	6,553	5,898	5,308	4,777	4,300	3,870	3,483
15	678,308	622,687	571,626	524,753	481,723	442,222	405,960	372,671	342,112	314,059
16										
17	45,816	39,035	33,258	28,336	24,142	20,569	17,525	14,931	12,721	10,839
18	65,536	52,560	42,153	33,807	27,113	21,745	17,439	13,986	11,217	8,996
19	17,562	16,737	15,950	15,201	14,486	13,805	13,156	12,538	11,949	11,387
20	1,336	1,126	950	801	675	569	480	404	341	287
21	104	91	80	70	61	53	47	41	36	31
22	156,484	144,278	133,024	122,649	113,082	104,262	96,129	88,631	81,718	75,344
23										
24	179,113	166,933	155,582	145,002	135,142	125,952	117,387	109,405	101,966	95,032
25	45	39	33	28	24	21	18	16	13	12
26	67,101	64,149	61,326	58,628	56,048	53,582	51,225	48,971	46,816	44,756
27	82,927	73,141	64,511	56,898	50,184	44,263	39,040	34,433	30,370	26,786
28										
29										
30	407,050	385,069	364,275	344,605	325,996	308,392	291,739	275,985	261,082	246,983
31	2,247	1,991	1,764	1,563	1,385	1,227	1,087	963	853	756
32	245,388	228,456	212,693	198,017	184,354	171,633	159,790	148,765	138,500	128,944
33	91,886	88,211	84,682	81,295	78,043	74,921	71,925	69,048	66,286	63,634
34										
35	267,505	253,862	240,915	228,628	216,968	205,903	195,402	185,436	175,979	167,004
36										
37										
38	7,730	6,493	5,454	4,581	3,848	3,233	2,715	2,281	1,916	1,609
39	8,090,009	7,523,708	6,997,049	6,507,255	6,051,747	5,628,125	5,234,156	4,867,765	4,527,022	4,210,130
40	124,958	115,711	107,148	99,219	91,877	85,078	78,782	72,952	67,554	62,555
41	4,708	4,473	4,249	4,036	3,835	3,643	3,461	3,288	3,123	2,967
42										
43	1,093,813	1,042,403	993,411	946,720	902,224	859,820	819,408	780,896	744,194	709,217
44	912,809	773,149	654,857	554,664	469,800	397,921	337,039	285,472	241,795	204,800
45										
46	14,388,590	13,293,901	12,292,211	11,374,375	10,532,306	9,758,829	9,047,564	8,392,827	7,789,538	7,233,150

TABLE 4
OIL PRODUCTION BY COUNTY
1960-2000
HIGH CASE

OIL STATISTICS BY COUNTY : High Case	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
COUNTY	OIL(BBLS)	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
ADAMS	941,834	909,188	607,988	478,045	492,183	600,561	434,002	390,650	442,762	552,617
ARAPAHOE								252,899	357,576	220,116
ARCHULETA	102,712	88,864	79,859	79,236	70,387	67,637	63,643	59,781	54,686	51,156
BACA		33,543	204,501	262,368	197,028	165,743	120,598	96,973	71,233	74,708
BENT	7,777	509	1,336	2,117	5,727	2,010	1,072	2,072	906	798
BOULDER	2,404	2,574	2,596	2,284	1,994	2,304	1,997	1,588	1,513	875
CHEYENNE									8,599	416,847
DELTA										
DOLORES										
ELBERT										6,739
FREMONT	27,324	28,471	29,041	26,287	24,010	20,586	19,856	21,205	23,248	24,877
GARFIELD								105	173	165
HUERFANO										
JACKSON	852,985	591,158	550,930	462,652	354,767	302,789	273,575	229,484	198,292	178,691
JEFFERSON										
KIOWA	7,719	9,646	14,426	11,297	15,624	27,351	205,317	771,361	1,014,657	1,101,127
KIT CARSON										
LA PLATA	24,125	42,198	56,976	58,037	43,167	30,487	22,935	24,405	24,074	22,510
LARIMER	191,943	187,047	183,764	274,222	391,818	302,103	366,150	409,613	329,161	261,184
LAS ANIMAS										
LINCOLN										
LOGAN	4,582,903	4,453,276	4,611,693	4,190,691	3,495,586	3,510,117	3,414,973	2,885,067	2,418,355	2,399,370
MESA										
MOFFAT	1,822,006	1,417,791	995,059	1,296,180	854,615	807,689	931,379	1,939,913	2,199,880	1,636,508
MONTEZUMA	79,964	106,858	231,500	367,101	512,931	1,309,434	824,619	529,165	436,202	317,192
MONTROSE										
MORGAN	9,300,584	8,949,620	5,525,159	3,387,108	2,283,008	1,487,552	1,325,614	1,802,495	1,344,845	946,954
PHILLIPS										
PITKIN										
PROWERS	1,520	877	77		4,115	3,418		5,004	606	1,280
RIO BLANCO	19,811,099	19,009,568	18,531,981	18,319,910	18,109,360	17,740,307	19,272,974	19,006,129	17,203,903	14,427,990
ROUTT	106,980	144,911	132,257	92,394	80,852	93,728	100,848	99,084	88,733	85,451
SAN MIGUEL				1,537					1,728	3,273
SEDGWICK										
WASHINGTON	8,032,673	9,288,140	8,980,912	7,168,757	6,223,849	5,381,404	4,553,470	4,137,000	4,080,952	4,389,067
WELD	1,583,812	1,491,962	1,731,564	1,789,741	1,592,531	1,639,372	1,555,283	1,240,622	1,608,245	1,166,575
YUMA	2,168	2,775	1,384			2,605	3,544	633		
TOTAL	47,482,571	46,758,976	42,473,013	38,269,964	34,753,542	33,497,197	33,491,849	33,905,248	31,937,399	28,286,070

Note: Production estimates after 1982 are projections by the Colorado Geological Survey.

	12	13	14	15	16	17	18	19	20	21	22
1											
2											
3											
4											
5											
6											
7	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
8	OIL(BBLS)	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	1,229,340	1,352,813	2,774,811	2,044,504	2,583,501	2,716,818	2,272,190	1,847,219	1,625,690	1,662,323	1,911,209
10	615,132	3,197,403	3,248,625	2,901,387	2,131,475	1,725,377	1,458,535	1,131,732	740,218	554,934	499,983
11	49,166	53,784	56,568	49,373	50,731	49,110	45,211	44,744	50,134	64,814	73,517
12	61,294	59,047	51,362	59,903	45,072	41,750	39,256	40,478	31,911	31,133	47,181
13	290	371	13,178	14,426	12,384	9,196	18,312	18,938	16,295	16,548	11,172
14	1,103	614	776	1,165	1,321	1,676	1,496	1,609	1,476	4,806	7,862
15	614,265	403,129	484,680	503,557	442,370	499,434	507,768	446,848	491,452	435,999	758,267
16											
17		9	138852	364817	313054	237666	163284	119181	90492	73067	61781
18	18,685	77,973	144,351	89,170	61,547	69,589	99,302	188,503	512,595	385,702	281,954
19	21,339	20,986	20,824	19,229	19,041	20,293	20,110	20,505	21,981	28,147	29,106
20								44	398	3,478	4,223
21					329	805	424	289	273	217	262
22	167,716	153,725	347,445	423,941	493,984	452,029	389,476	338,367	331,995	301,686	275,389
23											
24	1,096,308	1,265,688	1,066,652	726,524	600,899	543,057	455,113	449,262	379,970	335,307	302,299
25		4973	4006	6792	4675	9120	6462	3932	2125	1833	745
26	23,415	21,313	25,784	20,346	21,065	25,825	35,848	46,925	46,348	52,322	67,446
27	211,164	166,049	119,380	86,321	110,403	166,412	208,241	256,200	235,117	239,506	232,845
28											
29							221				
30	2,093,740	1,703,003	1,461,500	1,418,128	1,218,865	1,109,763	1,029,694	903,915	818,465	729,089	696,958
31					3,284	10,186	3,176	1,597	999	1,499	822
32	1,149,175	974,268	910,501	1,036,337	906,680	791,107	731,512	608,229	561,459	476,461	457,131
33	256,886	261,499	221,780	224,826	219,041	232,236	199,087	175,234	171,179	165,810	150,994
34								392,223			
35	715,097	629,320	643,641	498,772	419,494	507,314	444,040		378,213	369,906	370,968
36											
37											
38	3,916	3,282	3,717	1,990	1,382	14,406	16,570	9,350	14,128	37,605	17,128
39	11,540,300	12,518,262	15,775,513	20,779,546	21,627,533	21,555,616	21,925,268	21,981,024	21,742,980	19,549,533	17,878,737
40	80,031	77,497	71,360	64,574	59,432	84,683	154,320	172,343	161,263	160,337	148,062
41	2,015	11,233	24,872	18,760	12,518	11,012	9,010	12,538	15,640	11,473	6,503
42											
43	3,761,464	3,358,755	3,030,675	2,544,837	2,435,219	2,305,265	2,271,550	2,070,811	1,860,640	1,618,432	1,535,073
44	1,006,097	1,078,808	1,377,925	2,692,977	3,712,780	4,889,257	6,528,019	8,177,318	6,493,372	5,009,756	3,972,907
45											
46	24,719,014	27,393,832	32,018,978	36,592,202	37,508,079	38,078,388	39,033,495	39,459,358	36,783,111	32,325,078	29,801,524

	23	24	25	26	27	28	29	30	31	32
1										
2										
3										
4										
5										
6										
7	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
8	OIL(BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	3,111,509	3,300,077	3,019,570	2,762,907	2,528,060	2,313,175	2,116,555	1,936,648	1,772,033	1,621,410
10	804,482	767,244	644,485	541,367	454,749	381,989	320,871	269,531	226,406	190,181
11	108,603	73,381	68,978	64,839	60,949	57,292	53,855	50,623	47,586	44,731
12	66,285	63,328	59,212	55,363	51,764	48,400	45,254	42,312	39,562	36,990
13	6,840	7,506	6,380	5,423	4,610	3,918	3,330	2,831	2,406	2,045
14	23,576	23,203	20,187	17,562	15,279	13,293	11,565	10,061	8,753	7,615
15	1,343,446	1,465,017	1,289,215	1,134,509	998,368	878,564	773,136	680,360	598,717	526,871
16	175									
17	113025	193669	163,650	138,285	116,850	98,739	83,434	70,502	59,574	50,340
18	498,149	477,429	372,395	290,468	226,565	176,721	137,842	107,517	83,863	65,413
19	27,933	27,086	25,190	23,427	21,787	20,262	18,843	17,524	16,298	15,157
20	9,033	6,215	5,096	4,179	3,427	2,810	2,304	1,889	1,549	1,270
21	281	346	291	244	205	172	145	122	102	86
22	224,512	325,006	292,505	263,255	236,929	213,236	191,913	172,722	155,449	139,904
23										
24	319,148	337,585	312,266	288,846	267,183	247,144	228,608	211,463	195,603	180,933
25	1007	174	150	129	111	95	82	70	61	52
26	71,941	100,603	94,567	88,893	83,559	78,546	73,833	69,403	65,239	61,324
27	238,548	256,730	220,788	189,878	163,295	140,433	120,773	103,865	89,324	76,818
28										
29	773	55551								
30	719,272	670,853	623,893	580,221	539,605	501,833	466,705	434,035	403,653	375,397
31	10,389	6,680	5,845	5,114	4,475	3,916	3,426	2,998	2,623	2,295
32	470,040	466,988	431,964	399,567	369,599	341,879	316,238	292,520	270,581	250,288
33	143,330	132,681	126,047	119,745	113,757	108,070	102,666	97,533	92,656	88,023
34										
35	399,211	428,485	402,776	378,609	355,893	334,539	314,467	295,599	277,863	261,191
36										
37										
38	24,136	37,123	30,441	24,962	20,468	16,784	13,763	11,286	9,254	7,588
39	15,947,577	15,545,420	14,457,241	13,445,234	12,504,067	11,628,783	10,814,768	10,057,734	9,353,693	8,698,934
40	171,059	249,611	227,146	206,703	188,100	171,171	155,765	141,746	128,989	117,380
41	7,931	7,470	7,022	6,600	6,204	5,832	5,482	5,153	4,844	4,553
42		7,218								
43	1,506,326	1,686,968	1,594,185	1,506,505	1,423,647	1,345,346	1,271,352	1,201,428	1,135,349	1,072,905
44	4,040,101	4,068,451	3,356,472	2,769,089	2,284,499	1,884,712	1,554,887	1,282,782	1,058,295	873,093
45		191								
46	30,408,638	30,788,289	27,857,956	25,311,922	23,044,005	21,017,652	19,201,862	17,570,257	16,100,326	14,772,792

	33	34	35	36	37	38	39	40	41	42
1										
2										
3										
4										
5										
6										
7	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
8	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)	OIL (BBLS)
9	1,483,590	1,357,485	1,242,099	1,136,520	1,039,916	951,523	870,644	796,639	728,925	666,966
10	159,752	134,192	112,721	94,686	79,536	66,810	56,121	47,141	39,599	33,263
11	42,047	39,524	37,153	34,924	32,828	30,858	29,007	27,266	25,631	24,093
12	34,586	32,338	30,236	28,271	26,433	24,715	23,108	21,606	20,202	18,889
13	1,739	1,478	1,256	1,068	908	771	656	557	474	403
14	6,625	5,764	5,015	4,363	3,796	3,302	2,873	2,499	2,175	1,892
15	463,646	408,009	359,048	315,962	278,046	244,681	215,319	189,481	166,743	146,734
16										
17	42,537	35,944	30,373	25,665	21,687	18,325	15,485	13,085	11,057	9,343
18	51,022	39,797	31,042	24,213	18,886	14,731	11,490	8,962	6,991	5,453
19	14,096	13,109	12,192	11,338	10,544	9,806	9,120	8,481	7,888	7,336
20	1,042	854	700	574	471	386	317	260	213	175
21	72	61	51	43	36	30	25	21	18	15
22	125,914	113,323	101,990	91,791	82,612	74,351	66,916	60,224	54,202	48,782
23										
24	167,363	154,811	143,200	132,460	122,525	113,336	104,836	96,973	89,700	82,973
25	45	39	33	28	24	21	18	16	13	12
26	57,645	54,186	50,935	47,879	45,006	42,306	39,768	37,381	35,139	33,030
27	66,064	56,815	48,861	42,020	36,137	31,078	26,727	22,985	19,767	17,000
28										
29										
30	349,119	324,681	301,953	280,817	261,159	242,878	225,877	210,065	195,361	181,686
31	2,008	1,757	1,538	1,345	1,177	1,030	901	789	690	604
32	231,516	214,152	198,091	183,234	169,492	156,780	145,021	134,145	124,084	114,778
33	83,622	79,441	75,469	71,696	68,111	64,705	61,470	58,396	55,477	52,703
34										
35	245,520	230,788	216,941	203,925	191,689	180,188	169,377	159,214	149,661	140,681
36										
37										
38	6,223	5,102	4,184	3,431	2,813	2,307	1,892	1,551	1,272	1,043
39	8,090,009	7,523,708	6,997,049	6,507,255	6,051,747	5,628,125	5,234,156	4,867,765	4,527,022	4,210,130
40	106,816	97,203	88,454	80,493	73,249	66,657	60,658	55,198	50,230	45,710
41	4,280	4,023	3,782	3,555	3,342	3,141	2,953	2,776	2,609	2,453
42										
43	1,013,895	958,131	905,434	855,635	808,575	764,103	722,078	682,363	644,833	609,368
44	720,302	594,249	490,256	404,461	333,680	275,286	227,111	187,367	154,577	127,526
45										
46	13,571,096	12,480,965	11,490,054	10,587,651	9,764,428	9,012,233	8,323,922	7,693,210	7,114,551	6,583,037

TABLE 5
GAS PRODUCTION BY COUNTY
1960-2000
LOW CASE

GAS STATISTICS BY COUNTY: Low Case

COUNTY	1960 GAS(MCF)	1961 GAS(MCF)	1962 GAS(MCF)	1963 GAS(MCF)	1964 GAS(MCF)	1965 GAS(MCF)	1966 GAS(MCF)	1967 GAS(MCF)	1968 GAS(MCF)	1969 GAS(MCF)
ADAMS	1,535,362	1,955,055	1,220,665	1,050,292	2,188,058	2,072,497	1,873,798	1,601,798	1,563,951	1,437,461
ARAPAHOE								2,117	18,754	27,043
ARCHULETA									61,313	44,033
BACA	450,849	439,579	763,054	1,144,845	1,042,984	2,870,202	4,782,000	4,996,408	4,748,792	5,481,082
BENT	18,784	46,686	143,462	173,435	296,417	277,444	134,334	88,259	22,858	30,509
BOULDER										
CHEYENNE										7,200
DELTA										
DOLORES										
ELBERT										
FREMONT										
GARFIELD	1,223,942	1,450,722	1,457,255	1,381,116	1,380,305	1,482,505	1,867,560	1,223,285	1,061,346	997,784
HUERFANO										
JACKSON	78,649,324	76,647,096	45,609,521	25,189,823	17,400,392	11,465,091	9,729,022	10,193,736	4,546,998	3,359,958
JEFFERSON										
KIOWA			24,533	1,183,827	1,570,504	1,621,165	1,725,421	1,735,552	1,457,716	1,232,010
KIT CARSON										
LA PLATA	28,908,365	31,454,332	31,913,464	34,947,753	33,985,682	38,689,647	40,528,594	36,029,673	35,316,678	31,930,524
LARIMER	42,229	40,350	35,852	70,510	142,189	161,244	259,787	309,325	247,566	208,521
LAS ANIMAS	87,279	45,401	33,484	88,386	68,593	6,118				
LINCOLN										
LOGAN	10,299,775	10,314,275	8,716,333	7,492,103	6,800,557	6,024,118	5,848,878	5,339,964	4,475,914	4,378,039
MESA	610,876	800,341	1,782,284	2,113,175	2,095,946	2,524,083	8,622,924	7,652,634	6,403,817	5,708,831
MOFFAT	9,068,161	9,964,077	8,860,824	10,477,476	12,674,459	14,773,919	13,603,793	16,196,943	19,854,005	19,744,923
MONTEZUMA	198,358	294,601	509,001	791,099	1,247,884	2,562,663	2,704,456	2,111,923	1,706,983	1,339,997
MONTROSE	21,586	6,472	10,201	6,003						
MORGAN	13,134,344	11,519,957	10,105,293	11,163,253	10,123,226	8,883,819	7,461,240	7,778,737	8,066,435	7,913,855
PHILLIPS	36,696									
PITKIN		6,230		64,775	418,590	1,463,096	1,711,692	1,968,244	1,628,436	826,303
PROWERS	2,745	4,220	5,921							
RIO BLANCO	57,720,889	57,619,863	54,878,952	55,278,748	51,831,792	44,215,184	36,492,256	34,134,662	35,242,352	31,619,881
ROUTT	32,540	22,214	16,268	14,847	12,726	14,725	13,405	10,472	7,562	4,285
SAN MIGUEL				122,536				217,201	943,202	2,090,551
SEDGWICK	435,433	367,085	369,890	479,522	318,564	385,245	196,730	130,850	134,163	420,689
WASHINGTON	4,036,128	4,486,455	3,937,096	2,991,689	2,891,875	2,240,892	2,001,186	1,596,161	1,306,899	1,245,948
WELD	2,361,803	2,085,594	3,040,583	3,343,819	2,388,627	2,611,529	3,055,188	2,365,725	2,772,478	2,188,921
YUMA		900	300							
TOTAL	208,898,868	209,571,505	173,433,230	159,569,032	148,879,370	144,345,186	142,612,264	135,683,669	131,588,218	122,238,348

Note: Production estimate after 1982 are projections by the Colorado Geological Survey

	12	13	14	15	16	17	18	19	20	21	22
1											
2											
3											
4											
5											
6											
7											
8	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS (MCF)	GAS (MCF)	GAS(MCF)
10											
11	2,045,683	3,080,427	7,341,720	12,682,306	18,649,840	24,635,405	23,758,186	20,106,408	15,884,486	14,805,083	15,330,299
12	514,280	3,335,170	5,185,873	8,603,167	9,777,021	5,647,572	4,075,463	3,298,933	2,870,288	2,690,302	2,595,973
13	34,937	31,610	20,956	32,974	23,842	21,534	26,529	20,022	20,248	19,995	20,739
14	5,040,044	4,646,311	4,227,582	3,897,671	3,962,409	3,856,607	5,279,215	4,960,420	3,413,564	5,874,766	5,620,315
15	19,750	24,606	36,454	204,114	613,963	762,531	1,438,316	2,763,212	1,615,249	2,835,071	1,948,967
16									602	38,017	69,358
17	16,100	15,750	14,700	14,100	10,998	8,376	30,277	16,044	263,355	742,989	115,689
18											
19		673	399,017	1,334,461	1,932,612	1,906,462	1,603,682	1,382,619	1,225,033	1,199,555	1,092,790
20		15,221	643,019	465,285	353,992	861,988	747,433	795,657	1,750,224	2,318,497	1,852,010
21											
22	1,359,575	1,297,455	1,226,654	1,275,384	1,655,766	2,377,351	2,471,664	3,027,132	3,877,022	4,978,177	7,144,872
23					638	905	339	143	117	108	125
24	4,760,402	5,836,741	6,560,390	5,549,533	4,871,849	4,322,638	4,058,356	3,454,897	2,540,489	2,669,237	2,425,979
25											
26	1,390,331	1,626,213	1,967,143	2,589,296	2,301,491	1,736,822	1,854,332	2,051,821	1,804,295	2,014,778	2,061,683
27											39,677
28	31,093,623	27,938,968	27,257,949	31,123,951	25,399,910	25,263,594	25,750,074	27,336,933	24,610,100	26,439,698	26,698,181
29	167,958	97,243	37,887	22,374	28,173	40,036	120,340	289,020	453,436	439,674	351,740
30											
31											
32	3,915,458	3,595,148	3,020,531	2,575,318	1,852,643	2,142,872	1,748,373	1,058,575	1,318,100	1,254,736	1,489,358
33	4,495,774	3,731,679	2,514,936	2,635,207	1,857,118	1,924,824	1,884,891	1,889,707	2,246,404	1,940,108	2,618,435
34	23,519,656	23,850,830	25,266,064	26,572,756	24,788,242	21,975,653	19,482,475	20,620,444	22,087,702	21,091,471	22,452,249
35	979,602	904,321	698,985	552,284	551,037	659,588	706,628	938,119	914,366	1,002,208	939,223
36											
37	5,202,621	4,433,342	3,506,735	3,251,193	2,424,727	2,023,912	2,053,187	1,641,134	2,049,861	1,386,282	1,047,582
38								146	10,751	7,618	7,532
39	828,122	826,035	693,390	804,223	421,902	633,699	335,085				
40					34,827	624,432	1,400,292	1,715,692	1,522,337	1,362,531	1,095,408
41	27,610,037	25,402,528	26,336,983	28,267,567	27,383,429	27,814,619	26,571,713	28,725,009	29,976,491	30,608,551	31,554,384
42	3,589	1,329	1,587	1,802	1,473	3,197	22,502	43,771	44,793	56,283	66,356
43	2,111,628	2,326,776	3,443,352	2,559,780	1,811,503	1,596,501	1,333,269	1,657,282	1,869,085	1,675,392	1,308,930
44	371,266	349,526	339,592	270,626	304,176	255,058	302,500	249,006	118,597	81,154	132,087
45	1,025,888	1,022,502	1,276,763	1,169,808	851,609	790,168	896,071	653,367	398,902	457,672	1,602,735
46	1,932,999	2,637,712	4,792,603	7,610,634	17,581,833	42,932,026	58,202,214	66,218,694	64,685,347	62,822,284	56,604,330
47			10,503	22,255	74,329	186,549	387,799	695,131	1,411,743	2,119,757	3,518,609
48	118,439,309	117,028,113	126,803,253	144,088,067	149,521,352	174,996,630	186,541,205	195,609,338	189,049,658	193,005,723	191,805,615

	23	24	25	26	27	28	29	30	31	32
1										
2										
3										
4										
5										
6										
7										
8	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10										
11	18,142,889	19,785,642	17,807,078	16,026,370	14,423,733	12,981,360	11,683,224	10,514,901	9,463,411	8,517,070
12	3,633,593	3,070,352	2,640,503	2,270,832	1,952,916	1,679,508	1,444,377	1,242,164	1,068,261	918,704
13	10,781	12,267	11,654	11,071	10,517	9,992	9,492	9,017	8,567	8,138
14	5,929,224	5,293,452	4,658,238	4,099,249	3,607,339	3,174,459	2,793,524	2,458,301	2,163,305	1,903,708
15	1,016,598	1,945,756	1,692,808	1,472,743	1,281,286	1,114,719	969,805	843,731	734,046	638,620
16	548,870	2,073,968	1,928,790	1,793,775	1,668,211	1,551,436	1,442,835	1,341,837	1,247,908	1,160,555
17	297,409	367,673	345,613	324,876	305,383	287,060	269,837	253,646	238,428	224,122
18										
19	1,055,462	1,093,548	1,038,871	986,927	937,581	890,702	846,167	803,858	763,665	725,482
20	1,954,142	2,486,403	2,237,763	2,013,986	1,812,588	1,631,329	1,468,196	1,321,376	1,189,239	1,070,315
21										
22	8,878,977	8,438,277	7,594,449	6,835,004	6,151,504	5,536,354	4,982,718	4,484,446	4,036,002	3,632,402
23	127	171	154	139	125	112	101	91	82	74
24	2,910,484	3,008,928	2,873,526	2,744,218	2,620,728	2,502,795	2,390,169	2,282,612	2,179,894	2,081,799
25										
26	2,030,688	2,009,757	1,929,367	1,852,192	1,778,104	1,706,980	1,638,701	1,573,153	1,510,227	1,449,818
27	14,674	111,908	123,099	135,409	148,950	163,845	139,268	118,378	100,621	85,528
28	28,161,329	26,580,407	25,915,897	25,267,999	24,636,299	24,020,392	23,419,882	22,834,385	22,263,525	21,706,937
29	465,509	580,775	505,274	439,589	382,442	332,725	289,470	251,839	219,100	190,617
30										
31										
32	1,544,757	1,321,100	1,268,256	1,217,526	1,168,825	1,122,072	1,077,189	1,034,101	992,737	953,028
33	4,684,431	6,971,837	6,623,245	6,292,083	5,977,479	5,678,605	5,394,675	5,124,941	4,868,694	4,625,259
34	17,723,655	19,331,348	18,268,124	17,263,377	16,313,891	15,416,627	14,568,713	13,767,434	13,010,225	12,294,662
35	1,041,010	1,127,855	1,020,709	923,741	835,986	756,567	684,693	619,648	560,781	507,507
36										
37	1,443,224	1,921,704	1,835,227	1,752,642	1,673,773	1,598,453	1,526,523	1,457,829	1,392,227	1,329,577
38	4,819	8,401	7,141	6,070	5,159	4,385	3,728	3,168	2,693	2,289
39										
40	1,299,527	2,015,386	1,813,847	1,632,463	1,469,216	1,322,295	1,190,065	1,071,059	963,953	867,558
41	29,184,539	30,470,041	28,641,839	26,923,328	25,307,929	23,789,453	22,362,086	21,020,361	19,759,139	18,573,591
42	122,993	1,070,326	1,006,106	945,740	888,996	835,656	785,517	738,386	694,082	652,437
43	1,200,713	1,197,601	1,155,685	1,115,236	1,076,203	1,038,536	1,002,187	967,110	933,261	900,597
44	103,020	48,618	45,215	42,050	39,106	36,369	33,823	31,455	29,253	27,206
45	2,293,286	2,989,475	2,899,791	2,812,797	2,728,413	2,646,561	2,567,164	2,490,149	2,415,445	2,342,981
46	59,877,680	62,349,146	55,490,740	49,386,759	43,954,215	39,119,251	34,816,134	30,986,359	27,577,860	24,544,295
47	4,920,264	8,100,112	7,452,103	6,855,935	6,307,460	5,802,863	5,338,634	4,911,543	4,518,620	4,157,130
48	200,494,674	215,782,234	198,831,110	183,444,125	169,464,357	156,751,459	145,138,895	134,557,279	124,905,251	116,092,006

	33	34	35	36	37	38	39	40	41	42
1										
2										
3										
4										
5										
6										
7										
8	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10										
11	7,665,363	6,898,827	6,208,944	5,588,050	5,029,245	4,526,320	4,073,688	3,666,319	3,299,687	2,969,719
12	790,086	679,474	584,347	502,539	432,183	371,678	319,643	274,893	236,408	203,311
13	7,731	7,345	6,977	6,629	6,297	5,982	5,683	5,399	5,129	4,873
14	1,675,263	1,474,232	1,297,324	1,141,645	1,004,648	884,090	777,999	684,639	602,482	530,185
15	555,599	483,371	420,533	365,864	318,301	276,922	240,922	209,602	182,354	158,648
16	1,079,316	1,003,764	933,500	868,155	807,384	750,868	698,307	649,425	603,966	561,688
17	210,675	198,034	186,152	174,983	164,484	154,615	145,338	136,618	128,421	120,716
18										
19	689,208	654,748	622,010	590,910	561,364	533,296	506,631	481,300	457,235	434,373
20	963,283	866,955	780,260	702,234	632,010	568,809	511,928	460,735	414,662	373,196
21										
22	3,269,161	2,942,245	2,648,021	2,383,219	2,144,897	1,930,407	1,737,366	1,563,630	1,407,267	1,266,540
23	66	60	54	48	43	39	35	32	29	26
24	1,988,118	1,898,653	1,813,213	1,731,619	1,653,696	1,579,279	1,508,212	1,440,342	1,375,527	1,313,628
25										
26	1,391,825	1,336,152	1,282,706	1,231,398	1,182,142	1,134,856	1,089,462	1,045,883	1,004,048	963,886
27	72,699	61,794	52,525	44,646	37,949	32,257	27,418	23,306	19,810	16,838
28	21,164,264	20,635,157	20,119,278	19,616,296	19,125,889	18,647,742	18,181,548	17,727,010	17,283,834	16,851,738
29	165,837	144,278	125,522	109,204	95,008	82,657	71,911	62,563	54,430	47,354
30										
31										
32	914,907	878,310	843,178	809,451	777,073	745,990	716,150	687,504	660,004	633,604
33	4,393,996	4,174,296	3,965,582	3,767,302	3,578,937	3,399,990	3,229,991	3,068,491	2,915,067	2,769,313
34	11,618,456	10,979,441	10,375,572	9,804,915	9,265,645	8,756,034	8,274,452	7,819,358	7,389,293	6,982,882
35	459,294	415,661	376,173	340,437	308,095	278,826	252,338	228,366	206,671	187,037
36										
37	1,269,746	1,212,607	1,158,040	1,105,928	1,056,161	1,008,634	963,246	919,900	878,504	838,971
38	1,946	1,654	1,406	1,195	1,016	863	734	624	530	451
39										
40	780,802	702,722	632,449	569,205	512,284	461,056	414,950	373,455	336,110	302,499
41	17,459,175	16,411,625	15,426,927	14,501,312	13,631,233	12,813,359	12,044,557	11,321,884	10,642,571	10,004,017
42	613,291	576,494	541,904	509,390	478,826	450,097	423,091	397,706	373,843	351,413
43	869,076	838,659	809,306	780,980	753,646	727,268	701,814	677,250	653,546	630,672
44	25,301	23,530	21,883	20,351	18,927	17,602	16,370	15,224	14,158	13,167
45	2,272,692	2,204,511	2,138,376	2,074,224	2,011,998	1,951,638	1,893,089	1,836,296	1,781,207	1,727,771
46	21,844,423	19,441,536	17,302,967	15,399,641	13,705,680	12,198,055	10,856,269	9,662,080	8,599,251	7,653,333
47	3,824,560	3,518,595	3,237,108	2,978,139	2,739,888	2,520,697	2,319,041	2,133,518	1,962,836	1,805,809
48	108,036,159	100,664,729	93,912,237	87,719,907	82,034,950	76,809,927	72,002,185	67,573,351	63,488,880	59,717,657

TABLE 6
GAS PRODUCTION BY COUNTY
1960-2000
INTERMEDIATE CASE

GAS STATISTICS BY COUNTY: Intermediate Case

COUNTY	1960 GAS(MCF)	1961 GAS(MCF)	1962 GAS(MCF)	1963 GAS(MCF)	1964 GAS(MCF)	1965 GAS(MCF)	1966 GAS(MCF)	1967 GAS(MCF)	1968 GAS(MCF)	1969 GAS(MCF)
ADAMS	1,535,362	1,955,055	1,220,665	1,050,292	2,188,058	2,072,497	1,873,798	1,601,798	1,563,951	1,437,461
ARAPAHOE								2,117	18,754	27,043
ARCHULETA									61,313	44,033
BACA	450,849	439,579	763,054	1,144,845	1,042,984	2,870,202	4,782,000	4,996,408	4,748,792	5,481,082
BENT	18,784	46,686	143,462	173,435	296,417	277,444	134,334	88,259	22,858	30,509
BOULDER										
CHEYENNE										7,200
DELTA										
DOLORES										
ELBERT										
FREMONT										
GARFIELD	1,223,942	1,450,722	1,457,255	1,381,116	1,380,305	1,482,505	1,867,560	1,223,285	1,061,346	997,784
HUERFANO										
JACKSON	78,649,324	76,647,096	45,609,521	25,189,823	17,400,392	11,465,091	9,729,022	10,193,736	4,546,998	3,359,958
JEFFERSON										
KIOWA			24,533	1,183,827	1,570,504	1,621,165	1,725,421	1,735,552	1,457,716	1,232,010
KIT CARSON										
LA PLATA	28,908,365	31,454,332	31,913,464	34,947,753	33,985,682	38,689,647	40,528,594	36,029,673	35,316,678	31,930,524
LARIMER	42,229	40,350	35,852	70,510	142,189	161,244	259,787	309,325	247,566	208,521
LAS ANIMAS	87,279	45,401	33,484	88,386	68,593	6,118				
LINCOLN										
LOGAN	10,299,775	10,314,275	8,716,333	7,492,103	6,800,557	6,024,118	5,848,878	5,339,964	4,475,914	4,378,039
MESA	610,876	800,341	1,782,284	2,113,175	2,095,946	2,524,083	8,622,924	7,652,634	6,403,817	5,708,831
MOFFAT	9,068,161	9,964,077	8,860,824	10,477,476	12,674,459	14,773,919	13,603,793	16,196,943	19,854,005	19,744,923
MONTEZUMA	198,358	294,601	509,001	791,099	1,247,884	2,562,663	2,704,456	2,111,923	1,706,983	1,339,997
MONTROSE	21,586	6,472	10,201	6,003						
MORGAN	13,134,344	11,519,957	10,105,293	11,163,253	10,123,226	8,883,819	7,461,240	7,778,737	8,066,435	7,913,855
PHILLIPS	36,696									
PITKIN		6,230		64,775	418,590	1,463,096	1,711,692	1,968,244	1,628,436	826,303
PROWERS	2,745	4,220	5,921							
RIO BLANCO	57,720,889	57,619,863	54,878,952	55,278,748	51,831,792	44,215,184	36,492,256	34,134,662	35,242,352	31,619,881
ROUTT	32,540	22,214	16,268	14,847	12,726	14,725	13,405	10,472	7,562	4,285
SAN MIGUEL				122,536				217,201	943,202	2,090,551
SEDGWICK	435,433	367,085	369,890	479,522	318,564	385,245	196,730	130,850	134,163	420,689
WASHINGTON	4,036,128	4,486,455	3,937,096	2,991,689	2,891,875	2,240,892	2,001,186	1,596,161	1,306,899	1,245,948
WELD	2,361,803	2,085,594	3,040,583	3,343,819	2,388,627	2,611,529	3,055,188	2,365,725	2,772,478	2,188,921
YUMA		900	300							
TOTAL	208,898,868	209,571,505	173,433,230	159,569,032	148,879,370	144,345,186	142,612,264	135,683,669	131,588,218	122,238,348

Note: Production estimates after 1982 are projections by the Colorado Geological Survey.

	12	13	14	15	16	17	18	19	20	21	22
1											
2											
3											
4											
5											
6											
7											
8	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10											
11	2,045,683	3,080,427	7,341,720	12,682,306	18,649,840	24,635,405	23,758,186	20,106,408	15,884,486	14,805,083	15,330,299
12	514,280	3,335,170	5,185,873	8,603,167	9,777,021	5,647,572	4,075,463	3,298,933	2,870,288	2,690,302	2,595,973
13	34,937	31,610	20,956	32,974	23,842	21,534	26,529	20,022	20,248	19,995	20,739
14	5,040,044	4,646,311	4,227,582	3,897,671	3,962,409	3,856,607	5,279,215	4,960,420	3,413,564	5,874,766	5,620,315
15	19,750	24,606	36,454	204,114	613,963	762,531	1,438,316	2,763,212	1,615,249	2,835,071	1,948,967
16									602	38,017	69,358
17	16,100	15,750	14,700	14,100	10,998	8,376	30,277	16,044	263,355	742,989	115,689
18											
19		673	399,017	1,334,461	1,932,612	1,906,462	1,603,682	1,382,619	1,225,033	1,199,555	1,092,790
20		15,221	643,019	465,285	353,992	861,988	747,433	795,657	1,750,224	2,318,497	1,852,010
21											
22	1,359,575	1,297,455	1,226,654	1,275,384	1,655,766	2,377,351	2,471,664	3,027,132	3,877,022	4,978,177	7,144,872
23					638	905	339	143	117	108	125
24	4,760,402	5,836,741	6,560,390	5,549,533	4,871,849	4,322,638	4,058,356	3,454,897	2,540,489	2,669,237	2,425,979
25											
26	1,390,331	1,626,213	1,967,143	2,589,296	2,301,491	1,736,822	1,854,332	2,051,821	1,804,295	2,014,778	2,061,683
27											39,677
28	31,093,623	27,938,968	27,257,949	31,123,951	25,399,910	25,263,594	25,750,074	27,336,933	24,610,100	26,439,698	26,698,181
29	167,958	97,243	37,887	22,374	28,173	40,036	120,340	289,020	453,436	439,674	351,740
30											
31											
32	3,915,458	3,595,148	3,020,531	2,575,318	1,852,643	2,142,872	1,748,373	1,058,575	1,318,100	1,254,736	1,489,358
33	4,495,774	3,731,679	2,514,936	2,635,207	1,857,118	1,924,824	1,884,891	1,889,707	2,246,404	1,940,108	2,618,435
34	23,519,656	23,850,830	25,266,064	26,572,756	24,788,242	21,975,653	19,482,475	20,620,444	22,087,702	21,091,471	22,452,249
35	979,602	904,321	698,985	552,284	551,037	659,588	706,628	938,119	914,366	1,002,208	939,223
36											
37	5,202,621	4,433,342	3,506,735	3,251,193	2,424,727	2,023,912	2,053,187	1,641,134	2,049,861	1,386,282	1,047,582
38								146	10,751	7,618	7,532
39	828,122	826,035	693,390	804,223	421,902	633,699	335,085				
40					34,827	624,432	1,400,292	1,715,692	1,522,337	1,362,531	1,095,408
41	27,610,037	25,402,528	26,336,983	28,267,567	27,383,429	27,814,619	26,571,713	28,725,009	29,976,491	30,608,551	31,554,384
42	3,589	1,329	1,587	1,802	1,473	3,197	22,502	43,771	44,793	56,283	66,356
43	2,111,628	2,326,776	3,443,352	2,559,780	1,811,503	1,596,501	1,333,269	1,657,282	1,869,085	1,675,392	1,308,930
44	371,266	349,526	339,592	270,626	304,176	255,058	302,500	249,006	118,597	81,154	132,087
45	1,025,888	1,022,502	1,276,763	1,169,808	851,609	790,168	896,071	653,367	398,902	457,672	1,602,735
46	1,932,999	2,637,712	4,792,603	7,610,634	17,581,833	42,932,026	58,202,214	66,218,694	64,685,347	62,822,284	56,604,330
47			10,503	22,255	74,329	186,549	387,799	695,131	1,411,743	2,119,757	3,518,609
48	118,439,309	117,028,113	126,803,253	144,088,067	149,521,352	174,996,630	186,541,205	195,609,338	189,049,658	193,005,723	191,805,615

	23	24	25	26	27	28	29	30	31	32
1										
2										
3										
4										
5										
6										
7										
8	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10										
11	18,142,889	19,785,642	17,391,579	15,287,198	13,437,447	11,811,516	10,382,323	9,126,062	8,021,808	7,051,169
12	3,633,593	3,070,352	2,557,603	2,130,483	1,774,693	1,478,319	1,231,440	1,025,789	854,483	711,784
13	10,781	12,267	11,605	10,978	10,385	9,824	9,294	8,792	8,317	7,868
14	5,929,224	5,293,452	4,467,673	3,770,716	3,182,485	2,686,017	2,266,998	1,913,347	1,614,865	1,362,946
15	1,016,598	1,945,756	1,650,001	1,399,201	1,186,522	1,006,171	853,233	723,542	613,563	520,302
16	548,870	2,073,968	1,866,571	1,679,914	1,511,923	1,360,730	1,224,657	1,102,192	991,972	892,775
17	297,409	367,673	340,833	315,952	292,888	271,507	251,687	233,314	216,282	200,493
18										
19	1,055,462	1,093,548	1,024,654	960,101	899,615	842,939	789,834	740,074	693,450	649,762
20	1,954,142	2,486,403	2,145,766	1,851,796	1,598,100	1,379,160	1,190,215	1,027,156	886,435	764,994
21										
22	8,878,977	8,438,277	7,383,492	6,460,556	5,652,986	4,946,363	4,328,068	3,787,059	3,313,677	2,899,467
23	127	171	150	132	117	103	90	79	70	61
24	2,910,484	3,008,928	2,846,446	2,692,738	2,547,330	2,409,774	2,279,646	2,156,545	2,040,092	1,929,927
25										
26	2,030,688	2,009,757	1,889,172	1,775,821	1,669,272	1,569,116	1,474,969	1,386,471	1,303,282	1,225,085
27	14,674	111,908								
28	28,161,329	26,580,407	25,756,414	24,957,966	24,184,269	23,434,556	22,708,085	22,004,134	21,322,006	20,661,024
29	465,509	580,775	495,982	423,568	361,727	308,915	263,814	225,297	192,404	164,313
30										
31										
32	1,544,757	1,321,100	1,249,761	1,182,274	1,118,431	1,058,035	1,000,902	946,853	895,723	847,354
33	4,684,431	6,971,837	6,546,555	6,147,215	5,772,235	5,420,129	5,089,501	4,779,041	4,487,520	4,213,781
34	17,723,655	19,331,348	18,113,473	16,972,324	15,903,068	14,901,175	13,962,401	13,082,769	12,258,555	11,486,266
35	1,041,010	1,127,855	1,004,919	895,383	797,786	710,827	633,347	564,312	502,802	447,997
36										
37	1,443,224	1,921,704	1,821,775	1,727,043	1,637,237	1,552,101	1,471,391	1,394,879	1,322,345	1,253,583
38	4,819	8,401	6,889	5,649	4,632	3,798	3,115	2,554	2,094	1,717
39										
40	1,299,527	2,015,386	1,773,540	1,560,715	1,373,429	1,208,618	1,063,584	935,953	823,639	724,802
41	29,184,539	30,470,041	28,398,078	26,467,009	24,667,252	22,989,879	21,426,567	19,969,561	18,611,631	17,346,040
42	122,993	1,070,326	1,000,755	935,706	874,885	818,017	764,846	715,131	668,648	625,186
43	1,200,713	1,197,601	1,147,302	1,099,115	1,052,952	1,008,728	966,362	925,774	886,892	849,642
44	103,020	48,618	44,923	41,509	38,354	35,439	32,746	30,257	27,958	25,833
45	2,293,286	2,989,475	2,840,001	2,698,001	2,563,101	2,434,946	2,313,199	2,197,539	2,087,662	1,983,279
46	59,877,680	62,349,146	53,994,360	46,759,116	40,493,395	35,067,280	30,368,264	26,298,917	22,774,862	19,723,030
47	4,920,264	8,100,112	7,379,202	6,722,453	6,124,155	5,579,105	5,082,565	4,630,216	4,218,127	3,842,714
48	200,494,674	215,782,234	195,149,475	176,930,633	160,730,670	146,303,088	133,433,141	121,933,610	111,641,163	102,413,195

	33	34	35	36	37	38	39	40	41	42
1										
2										
3										
4										
5										
6										
7										
8	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10										
11	6,197,978	5,448,023	4,788,812	4,209,366	3,700,032	3,252,328	2,858,797	2,512,882	2,208,824	1,941,556
12	592,916	493,899	411,418	342,711	285,478	237,803	198,090	165,009	137,453	114,498
13	7,443	7,041	6,661	6,301	5,961	5,639	5,335	5,047	4,774	4,516
14	1,150,326	970,875	819,419	691,589	583,701	492,644	415,792	350,928	296,183	249,979
15	441,216	374,151	317,280	269,053	228,157	193,477	164,069	139,130	117,983	100,049
16	803,498	723,148	650,833	585,750	527,175	474,457	427,012	384,310	345,879	311,291
17	185,857	172,290	159,712	148,053	137,246	127,227	117,939	109,330	101,348	93,950
18										
19	608,827	570,471	534,532	500,856	469,302	439,736	412,033	386,075	361,752	338,962
20	660,190	569,744	491,689	424,327	366,195	316,026	272,730	235,366	203,121	175,294
21										
22	2,537,034	2,219,905	1,942,417	1,699,614	1,487,163	1,301,267	1,138,609	996,283	871,747	762,779
23	54	48	42	37	32	29	25	22	19	17
24	1,825,711	1,727,123	1,633,858	1,545,630	1,462,166	1,383,209	1,308,515	1,237,856	1,171,011	1,107,777
25										
26	1,151,580	1,082,485	1,017,536	956,484	899,095	845,149	794,440	746,774	701,968	659,850
27										
28	20,020,532	19,399,896	18,798,499	18,215,746	17,651,057	17,103,875	16,573,655	16,059,871	15,562,015	15,079,593
29	140,323	119,836	102,340	87,398	74,638	63,741	54,435	46,487	39,700	33,904
30										
31										
32	801,597	758,310	717,362	678,624	641,978	607,312	574,517	543,493	514,144	486,380
33	3,956,740	3,715,379	3,488,741	3,275,928	3,076,096	2,888,454	2,712,259	2,546,811	2,391,455	2,245,577
34	10,762,631	10,084,585	9,449,257	8,853,953	8,296,154	7,773,497	7,283,766	6,824,889	6,394,921	5,992,041
35	399,165	355,656	316,890	282,349	251,573	224,151	199,719	177,949	158,553	141,271
36										
37	1,188,397	1,126,600	1,068,017	1,012,480	959,831	909,920	862,604	817,749	775,226	734,914
38	1,408	1,155	947	776	637	522	428	351	288	236
39										
40	637,826	561,287	493,933	434,661	382,501	336,601	296,209	260,664	229,384	201,858
41	16,166,509	15,067,186	14,042,618	13,087,720	12,197,755	11,368,307	10,595,263	9,874,785	9,203,299	8,577,475
42	584,549	546,553	511,027	477,810	446,753	417,714	390,562	365,176	341,439	319,246
43	813,958	779,771	747,021	715,646	685,589	656,794	629,209	602,782	577,465	553,212
44	23,870	22,055	20,379	18,830	17,399	16,077	14,855	13,726	12,683	11,719
45	1,884,115	1,789,909	1,700,414	1,615,393	1,534,623	1,457,892	1,384,998	1,315,748	1,249,960	1,187,462
46	17,080,144	14,791,405	12,809,357	11,092,903	9,606,454	8,319,189	7,204,418	6,239,026	5,402,996	4,678,995
47	3,500,712	3,189,149	2,905,315	2,646,742	2,411,182	2,196,586	2,001,090	1,822,993	1,660,747	1,512,940
48	94,125,106	86,667,936	79,946,322	73,876,732	68,385,924	63,409,625	58,891,371	153,435,192	51,036,340	47,617,340

1	2	3	4	5	6	7	8	9	10	11

TABLE 7
GAS PRODUCTION BY COUNTY
1960-2000
HIGH CASE

GAS STATISTICS BY COUNTY: High Case

COUNTY	1960 GAS(MCF)	1961 GAS(MCF)	1962 GAS(MCF)	1963 GAS(MCF)	1964 GAS(MCF)	1965 GAS(MCF)	1966 GAS(MCF)	1967 GAS(MCF)	1968 GAS(MCF)	1969 GAS(MCF)
ADAMS	1,535,362	1,955,055	1,220,665	1,050,292	2,188,058	2,072,497	1,873,798	1,601,798	1,563,951	1,437,461
ARAPAHOE								2,117	18,754	27,043
ARCHULETA									61,313	44,033
BACA	450,849	439,579	763,054	1,144,845	1,042,984	2,870,202	4,782,000	4,996,408	4,748,792	5,481,082
BENT	18,784	46,686	143,462	173,435	296,417	277,444	134,334	88,259	22,858	30,509
BOULDER										
CHEYENNE										7,200
DELTA										
DOLORES										
ELBERT										
FREMONT										
GARFIELD	1,223,942	1,450,722	1,457,255	1,381,116	1,380,305	1,482,505	1,867,560	1,223,285	1,061,346	997,784
HUERFANO										
JACKSON	78,649,324	76,647,096	45,609,521	25,189,823	17,400,392	11,465,091	9,729,022	10,193,736	4,546,998	3,359,958
JEFFERSON										
KIOWA			24,533	1,183,827	1,570,504	1,621,165	1,725,421	1,735,552	1,457,716	1,232,010
KIT CARSON										
LA PLATA	28,908,365	31,454,332	31,913,464	34,947,753	33,985,682	38,689,647	40,528,594	36,029,673	35,316,678	31,930,524
LARIMER	42,229	40,350	35,852	70,510	142,189	161,244	259,787	309,325	247,566	208,521
LAS ANIMAS	87,279	45,401	33,484	88,386	68,593	6,118				
LINCOLN										
LOGAN	10,299,775	10,314,275	8,716,333	7,492,103	6,800,557	6,024,118	5,848,878	5,339,964	4,475,914	4,378,039
MESA	610,876	800,341	1,782,284	2,113,175	2,095,946	2,524,083	8,622,924	7,652,634	6,403,817	5,708,831
MOFFAT	9,068,161	9,964,077	8,860,824	10,477,476	12,674,459	14,773,919	13,603,793	16,196,943	19,854,005	19,744,923
MONTEZUMA	198,358	294,601	509,001	791,099	1,247,884	2,562,663	2,704,456	2,111,923	1,706,983	1,339,997
MONTROSE	21,586	6,472	10,201	6,003						
MORGAN	13,134,344	11,519,957	10,105,293	11,163,253	10,123,226	8,883,819	7,461,240	7,778,737	8,066,435	7,913,855
PHILLIPS	36,696									
PITKIN		6,230		64,775	418,590	1,463,096	1,711,692	1,968,244	1,628,436	826,303
PROWERS	2,745	4,220	5,921							
RIO BLANCO	57,720,889	57,619,863	54,878,952	55,278,748	51,831,792	44,215,184	36,492,256	34,134,662	35,242,352	31,619,881
ROUTT	32,540	22,214	16,268	14,847	12,726	14,725	13,405	10,472	7,562	4,285
SAN MIGUEL				122,536				217,201	943,202	2,090,551
SEDGWICK	435,433	367,085	369,890	479,522	318,564	385,245	196,730	130,850	134,163	420,689
WASHINGTON	4,036,128	4,486,455	3,937,096	2,991,689	2,891,875	2,240,892	2,001,186	1,596,161	1,306,899	1,245,948
WELD	2,361,803	2,085,594	3,040,583	3,343,819	2,388,627	2,611,529	3,055,188	2,365,725	2,772,478	2,188,921
YUMA		900	300							
TOTAL	208,898,868	209,571,505	173,433,230	159,569,032	148,879,370	144,345,186	142,612,264	135,683,669	131,588,218	122,238,348

Note: Production estimates after 1982 are projections by the Colorado Geological Survey.

	12	13	14	15	16	17	18	19	20	21	22
1											
2											
3											
4											
5											
6											
7											
8	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10											
11	2,045,683	3,080,427	7,341,720	12,682,306	18,649,840	24,635,405	23,758,186	20,106,408	15,884,486	14,805,083	15,330,299
12	514,280	3,335,170	5,185,873	8,603,167	9,777,021	5,647,572	4,075,463	3,298,933	2,870,288	2,690,302	2,595,973
13	34,937	31,610	20,956	32,974	23,842	21,534	26,529	20,022	20,248	19,995	20,739
14	5,040,044	4,646,311	4,227,582	3,897,671	3,962,409	3,856,607	5,279,215	4,960,420	3,413,564	5,874,766	5,620,315
15	19,750	24,606	36,454	204,114	613,963	762,531	1,438,316	2,763,212	1,615,249	2,835,071	1,948,967
16									602	38,017	69,358
17	16,100	15,750	14,700	14,100	10,998	8,376	30,277	16,044	263,355	742,989	115,689
18											
19		673	399,017	1,334,461	1,932,612	1,906,462	1,603,682	1,382,619	1,225,033	1,199,555	1,092,790
20		15,221	643,019	465,285	353,992	861,988	747,433	795,657	1,750,224	2,318,497	1,852,010
21											
22	1,359,575	1,297,455	1,226,654	1,275,384	1,655,766	2,377,351	2,471,664	3,027,132	3,877,022	4,978,177	7,144,872
23					638	905	339	143	117	108	125
24	4,760,402	5,836,741	6,560,390	5,549,533	4,871,849	4,322,638	4,058,356	3,454,897	2,540,489	2,669,237	2,425,979
25											
26	1,390,331	1,626,213	1,967,143	2,589,296	2,301,491	1,736,822	1,854,332	2,051,821	1,804,295	2,014,778	2,061,683
27											39,677
28	31,093,623	27,938,968	27,257,949	31,123,951	25,399,910	25,263,594	25,750,074	27,336,933	24,610,100	26,439,698	26,698,181
29	167,958	97,243	37,887	22,374	28,173	40,036	120,340	289,020	453,436	439,674	351,740
30											
31											
32	3,915,458	3,595,148	3,020,531	2,575,318	1,852,643	2,142,872	1,748,373	1,058,575	1,318,100	1,254,736	1,489,358
33	4,495,774	3,731,679	2,514,936	2,635,207	1,857,118	1,924,824	1,884,891	1,889,707	2,246,404	1,940,108	2,618,435
34	23,519,656	23,850,830	25,266,064	26,572,756	24,788,242	21,975,653	19,482,475	20,620,444	22,087,702	21,091,471	22,452,249
35	979,602	904,321	698,985	552,284	551,037	659,588	706,628	938,119	914,366	1,002,208	939,223
36											
37	5,202,621	4,433,342	3,506,735	3,251,193	2,424,727	2,023,912	2,053,187	1,641,134	2,049,861	1,386,282	1,047,582
38								146	10,751	7,618	7,532
39	828,122	826,035	693,390	804,223	421,902	633,699	335,085				
40					34,827	624,432	1,400,292	1,715,692	1,522,337	1,362,531	1,095,408
41	27,610,037	25,402,528	26,336,983	28,267,567	27,383,429	27,814,619	26,571,713	28,725,009	29,976,491	30,608,551	31,554,384
42	3,589	1,329	1,587	1,802	1,473	3,197	22,502	43,771	44,793	56,283	66,356
43	2,111,628	2,326,776	3,443,352	2,559,780	1,811,503	1,596,501	1,333,269	1,657,282	1,869,085	1,675,392	1,308,930
44	371,266	349,526	339,592	270,626	304,176	255,058	302,500	249,006	118,597	81,154	132,087
45	1,025,888	1,022,502	1,276,763	1,169,808	851,609	790,168	896,071	653,367	398,902	457,672	1,602,735
46	1,932,999	2,637,712	4,792,603	7,610,634	17,581,833	42,932,026	58,202,214	66,218,694	64,685,347	62,822,284	56,604,330
47			10,503	22,255	74,329	186,549	387,799	695,131	1,411,743	2,119,757	3,518,609
48	118,439,309	117,028,113	126,803,253	144,088,067	149,521,352	174,996,630	186,541,205	195,609,338	189,049,658	193,005,723	191,805,615

	23	24	25	26	27	28	29	30	31	32
1										
2										
3										
4										
5										
6										
7										
8	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10										
11	18,142,889	19,785,642	17,213,509	14,975,752	13,028,905	11,335,147	9,861,578	8,579,573	7,464,228	6,493,879
12	3,633,593	3,070,352	2,533,040	2,089,758	1,724,051	1,422,342	1,173,432	968,081	798,667	658,900
13	10,781	12,267	11,408	10,610	9,867	9,176	8,534	7,937	7,381	6,864
14	5,929,224	5,293,452	4,340,631	3,559,317	2,918,640	2,393,285	1,962,494	1,609,245	1,319,581	1,082,056
15	1,016,598	1,945,756	1,624,706	1,356,630	1,132,786	945,876	789,807	659,489	550,673	459,812
16	548,870	2,073,968	1,804,352	1,569,786	1,365,714	1,188,171	1,033,709	899,327	782,414	680,701
17	297,409	367,673	330,906	297,815	268,034	241,230	217,107	195,397	175,857	158,271
18										
19	1,055,462	1,093,548	1,006,064	925,579	851,533	783,410	720,737	663,078	610,032	561,229
20	1,954,142	2,486,403	2,088,579	1,754,406	1,473,701	1,237,909	1,039,843	873,468	733,714	616,319
21										
22	8,878,977	8,438,277	7,088,153	5,954,048	5,001,401	4,201,176	3,528,988	2,964,350	2,490,054	2,091,645
23	127	171	144	121	101	85	72	60	50	42
24	2,910,484	3,008,928	2,798,303	2,602,422	2,420,252	2,250,835	2,093,276	1,946,747	1,810,475	1,683,741
25										
26	2,030,688	2,009,757	1,848,976	1,701,058	1,564,974	1,439,776	1,324,594	1,218,626	1,121,136	1,031,445
27	14,674	111,908	83,931	62,948	47,211	35,408	26,556	19,917	14,938	11,203
28	28,161,329	26,580,407	25,384,289	24,241,996	23,151,106	22,109,306	21,114,387	20,164,240	19,256,849	18,390,291
29	465,509	580,775	487,851	409,795	344,228	289,151	242,887	204,025	171,381	143,960
30										
31										
32	1,544,757	1,321,100	1,228,623	1,142,619	1,062,636	988,252	919,074	854,739	794,907	739,264
33	4,684,431	6,971,837	6,483,808	6,029,942	5,607,846	5,215,297	4,850,226	4,510,710	4,194,960	3,901,313
34	17,723,655	19,331,348	17,978,154	16,719,683	15,549,305	14,460,854	13,448,594	12,507,192	11,631,689	10,817,471
35	1,041,010	1,127,855	992,512	873,411	768,602	676,369	595,205	523,780	460,927	405,616
36										
37	1,443,224	1,921,704	1,806,402	1,698,018	1,596,137	1,500,368	1,410,346	1,325,726	1,246,182	1,171,411
38	4,819	8,401	6,721	5,377	4,301	3,441	2,753	2,202	1,762	1,409
39										
40	1,299,527	2,015,386	1,733,232	1,490,579	1,281,898	1,102,433	948,092	815,359	701,209	603,040
41	29,184,539	30,470,041	28,184,788	26,070,929	24,115,609	22,306,938	20,633,918	19,086,374	17,654,896	16,330,779
42	122,993	1,070,326	984,700	905,924	833,450	766,774	705,432	648,998	597,078	549,312
43	1,200,713	1,197,601	1,131,733	1,069,488	1,010,666	955,079	902,550	852,910	806,000	761,670
44	103,020	48,618	44,485	40,704	37,244	34,079	31,182	28,531	26,106	23,887
45	2,293,286	2,989,475	2,780,212	2,585,597	2,404,605	2,236,283	2,079,743	1,934,161	1,798,770	1,672,856
46	59,877,680	62,349,146	52,685,028	44,518,849	37,618,427	31,787,571	26,860,498	22,697,120	19,179,067	16,206,311
47	4,920,264	8,100,112	7,209,100	6,416,099	5,710,328	5,082,192	4,523,151	4,025,604	3,582,788	3,188,681
48	200,494,674	215,782,234	191,894,339	171,079,260	152,903,557	136,998,214	123,048,765	110,786,967	99,983,770	90,443,380

	33	34	35	36	37	38	39	40	41	42
1										
2										
3										
4										
5										
6										
7										
8	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
9	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)	GAS(MCF)
10										
11	5,649,674	4,915,217	4,276,239	3,720,328	3,236,685	2,815,916	2,449,847	2,131,367	1,854,289	1,613,232
12	543,593	448,464	369,983	305,236	251,820	207,751	171,395	141,401	116,656	96,241
13	6,384	5,937	5,521	5,135	4,775	4,441	4,130	3,841	3,572	3,322
14	887,286	727,575	596,611	489,221	401,161	328,952	269,741	221,188	181,374	148,726
15	383,943	320,592	267,695	223,525	186,643	155,847	130,132	108,661	90,732	75,761
16	592,209	515,222	448,243	389,972	339,275	295,170	256,798	223,414	194,370	169,102
17	142,444	128,200	115,380	103,842	93,458	84,112	75,701	68,131	61,317	55,186
18										
19	516,331	475,025	437,023	402,061	369,896	340,304	313,080	288,034	264,991	243,792
20	517,708	434,875	365,295	306,848	257,752	216,512	181,870	152,771	128,327	107,795
21										
22	1,756,982	1,475,865	1,239,727	1,041,370	874,751	734,791	617,224	518,468	435,514	365,831
23	36	30	25	21	18	15	13	11	9	7
24	1,565,879	1,456,268	1,354,329	1,259,526	1,171,359	1,089,364	1,013,109	942,191	876,238	814,901
25										
26	948,930	873,015	803,174	738,920	679,806	625,422	575,388	529,357	487,009	448,048
27	8,403	6,302	4,726	3,545	2,659	1,994	1,495	1,122	841	631
28	17,562,728	16,772,405	16,017,647	15,296,853	14,608,494	13,951,112	13,323,312	12,723,763	12,151,194	11,604,390
29	120,927	101,578	85,326	71,674	60,206	50,573	42,481	35,684	29,975	25,179
30										
31										
32	687,515	639,389	594,632	553,008	514,297	478,296	444,816	413,678	384,721	357,790
33	3,628,221	3,374,246	3,138,049	2,918,385	2,714,098	2,524,111	2,347,424	2,183,104	2,030,287	1,888,167
34	10,060,248	9,356,030	8,701,108	8,092,031	7,525,589	6,998,797	6,508,882	6,053,260	5,629,532	5,235,464
35	356,942	314,109	276,416	243,246	214,056	188,370	165,765	145,873	128,369	112,964
36										
37	1,101,126	1,035,059	972,955	914,578	859,703	808,121	759,634	714,056	671,212	630,940
38	1,128	902	722	577	462	369	296	236	189	151
39										
40	518,614	446,008	383,567	329,868	283,686	243,970	209,814	180,440	155,179	133,454
41	15,105,971	13,973,023	12,925,046	11,955,668	11,058,993	10,229,568	9,462,350	8,752,674	8,096,224	7,489,007
42	505,367	464,937	427,742	393,523	362,041	333,078	306,432	281,917	259,364	238,615
43	719,778	680,190	642,780	607,427	574,018	542,447	512,613	484,419	457,776	432,598
44	21,857	19,999	18,299	16,744	15,320	14,018	12,827	11,736	10,739	9,826
45	1,555,756	1,446,853	1,345,573	1,251,383	1,163,786	1,082,321	1,006,559	936,100	870,573	809,633
46	13,694,333	11,571,712	9,778,096	8,262,491	6,981,805	5,899,625	4,985,183	4,212,480	3,559,546	3,007,816
47	2,837,926	2,525,754	2,247,921	2,000,650	1,780,578	1,584,715	1,410,396	1,255,253	1,117,175	994,286
48	81,998,237	74,504,780	67,839,849	61,897,653	56,587,193	51,830,084	47,558,705	43,714,628	40,247,289	37,112,854

TABLE 8
PROJECTED EMPLOYMENT GROWTH RATES

EASTERN COLORADO	LOW CASE (percent)	INTERMEDIATE CASE (percent)	HIGH CASE (percent)
Adams	3	3/4	5/5
Arapahoe	1	3/4	5/5
Baca	2	4/4	6/5
Bent	1	3/4	5/5
Boulder	3	5/4	10/5
Cheyenne	1	3/4	5/5
Elbert	4	6/4	8/5
Fremont	1	3/4	5/5
Huerfano	1	3/4	5/5
kiowa	1	3/4	5/5
Kit Carson	3	5/5	8/5
Larimer	3	5/4	8/5
Lincoln	5	8/4	10/5
Logan	3	5/4	10/5
Morgan	1	3/4	5/5
Phillips	3	5/4	8/5
Prowers	4	7/4	10/5
Sedwick	1	3/4	5/5
Washington	3	5/4	7/5
Weld	5	8/4	10/5
Yuma	5	8/4	11/5
Jefferson	0	0	0
Las Animas	0	0	0

WESTERN COLORADO	LOW	INTERMEDIATE	HIGH
Archuleta	3	5/4	7/5
Dolores	3	5/4	7/5
Garfield	3	5/4	7/5
Jackson	1	3/4	5/5
La Plata	3	5/4	7/5
Mesa	5	8/4	10/5
Moffat	1	3/4	5/5
Montezuma	3	5/4	8/5
Rio Blanco	3	5/4	10/5
Routt	3	5/4	8/5
San Miguel	1	3/4	5/5
Delta		TOO SMALL	
Montrose		TOO SMALL	
Pitkin		TOO SMALL	

Explanation of Projected Employment Rates. In Adams County a low case projected growth rate of 3 percent is applied to the 1982 calculated employment figure, and to each year consecutively from 1983 through 2000. In Adams County, an Intermediate case projected growth rate of 5% is applied to the 1982 calculated employment figure and for each year through 1990. A projected growth rate of 4% is applied from 1991 through 2000. An intermediate case projected growth rate of 5 percent is applied to the 1982 calculated employment figure and for each year through 1990. A projected growth rate of 4 percent is applied from 1991 through 2000. A high case projected growth rate of 10 percent is applied to the 1982 calculated employment figure and for each year through 1990. A projected growth rate of 5 percent is applied from 1991 through 2000.

TABLE 9
OIL AND GAS EMPLOYMENT
1982-2000
LOW CASE

COUNTY NAME	General percentage of oil, gas or dryholes drilled based on 6-year trend			DEPTH RANGE	Wells drilled in 1982	Producing wells in 1982	ACTUAL EMPLOYMENT	PROJECTED EMPLOYMENT				
	oil	gas	dry				1982	1983	1984	1985	1986	1987
EASTERN COLORADO												
Adams	52	11	33	6,500 to 7,000	290	1037	545	561	578	596	613	632
Arapahoe	34	5	60	6,600 to 7,600	68	194	119	120	121	123	124	125
Baca	40	44	53	3,300 to 4,600	21	156	36	37	37	38	39	40
Bent	1	29	70	4,000 to 5,400	8	33	14	14	14	14	15	15
Boulder	25	43	24	5,000 to 8,000	35	60	59	61	63	64	66	68
Cheyenne	42	4	55	4,200 to 5,700	31	97	55	56	56	57	57	58
Elbert	48	1	51	7,500 to 8,000	61	99	99	103	107	111	116	120
Fremont	20	0	80	3,000 to 4,000	3	35	7	7	7	7	7	7
Huerfano	2	15	75	2,500 to 5,200	1	1	2	2	2	2	2	2
Kiowa	16	15	69	4,700 to 5,400	28	90	42	42	43	43	44	44
Kit Carson	0	15	85	2,000 to 6,000	16	0	89	92	94	97	100	103
Larimer	77	3	20	4,000 to 6,000	16	118	33	34	35	36	37	38
Lincoln	24	0	76	3,000 to 7,500	5	2	84	88	93	97	102	107
Logan	11	8	81	4,900 to 5,200	46	263	67	69	71	73	75	78
Morgan	16	9	75	5,600 to 6,000	68	159	113	114	115	116	118	119
Phillips	0	36	64	2,600 to 3,000	7	2	6	6	6	7	7	7
Prowers	12	15	73	4,200 to 5,200	33	41	31	32	34	35	36	38
Sedgwick	10	16	58	3,000 to 5,500	4	3	6	6	6	6	6	6
Washington	10	14	76	4,200 to 4,600	127	477	158	163	168	173	178	183
Weld	43	35	22	5,900 to 7,300	390	2533	883	927	974	1,022	1,073	1,127
Yuma	0	61	39	2,300 to 2,800	202	357	214	225	236	248	260	273
Jefferson					0	0	0	0	0	0	0	0
Las Animas					3	0	2	2	2	2	2	2
				TOTAL	1,463		2,664	2,761	2,863	2,968	3,078	3,193
WESTERN COLORADO												
Archuleta	38	0	62	1,000 to 2,500	13	36	20	21	21	22	23	23
Dolores	30	4	65	4,200 to 6,900	14	15	46	47	49	50	52	53
Garfield	3	80	17	5,000 to 6,300	52	177	191	197	203	209	215	221
Jackson	50	5	45	1,000 to 4,400	23	120	41	41	42	42	43	43
LaPlata	9	82	9	5,000 to 6,700	65	832	390	402	414	426	439	452
Mesa	1	74	25	3,600 to 5,400	103	180	383	402	422	443	466	489
Moffat	14	32	54	5,100 to 7,200	42	241	318	321	324	328	331	334
Montezuma	20	10	70	900 to 3,500	38	48	127	131	135	139	143	147
Rio Blanco	21	59	20	3,800 to 5,500	192	1058	555	572	589	606	625	643
Routt	30	0	70	4,200 to 8,400	12	28	42	43	45	46	47	49
San Miguel	0	20	80	9,000 to 11,000	3	13	16	16	16	16	17	17
Delta					8	0	25	25	26	26	26	26
Montrose					2	0	6	6	6	6	6	6
Pitkin					0	0	0	0	0	0	0	0
				TOTAL	567		2,160	2,224	2,291	2,360	2,431	2,505
				GRAND TOTAL	2,030		4,824	4,986	5,154	5,328	5,509	5,698

Note: These figures are based on 1982 statistics and are only projections of future trends.

PROJECTED EMPLOYMENT

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
651	670	690	711	732	754	777	800	824	849	875	901	928
126	128	129	130	131	133	134	135	137	138	140	141	142
41	41	42	43	44	45	46	47	48	48	49	50	51
15	15	15	15	15	16	16	16	16	16	16	17	17
70	73	75	77	79	82	84	87	89	92	95	98	100
58	59	60	60	61	61	62	63	63	64	64	65	66
125	130	135	141	147	152	159	165	171	178	185	193	201
7	8	8	8	8	8	8	8	8	8	8	8	8
2	2	2	2	2	2	2	2	2	2	2	2	2
45	45	45	46	46	47	47	48	48	49	49	50	50
106	109	113	116	120	123	127	131	135	139	143	147	152
39	41	42	43	44	46	47	48	50	51	53	55	56
113	118	124	130	137	144	151	158	166	175	183	193	202
80	82	85	87	90	93	96	98	101	104	108	111	114
120	121	122	124	125	126	127	129	130	131	133	134	135
7	7	8	8	8	8	9	9	9	9	10	10	10
39	41	42	44	46	48	50	52	54	56	58	60	63
6	6	6	7	7	7	7	7	7	7	7	7	7
189	194	200	206	212	219	225	232	239	246	254	261	269
1,183	1,242	1,305	1,370	1,438	1,510	1,586	1,665	1,748	1,836	1,927	2,024	2,125
287	301	316	332	349	366	384	404	424	445	467	490	515
0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	2	2	2	2	2	2	2	2	2	2	2
3,313	3,437	3,567	3,703	3,844	3,991	4,145	4,305	4,472	4,647	4,829	5,019	5,217
24	25	25	26	27	28	29	29	30	31	32	33	34
55	57	58	60	62	64	66	68	70	72	74	76	78
228	235	242	249	257	264	272	280	289	298	306	316	325
44	44	44	45	45	46	46	47	47	48	48	49	49
466	480	494	509	524	540	556	573	590	608	626	645	664
513	539	566	594	624	655	688	722	758	796	836	878	922
338	341	344	348	351	355	358	362	366	369	373	377	380
152	156	161	166	171	176	181	187	192	198	204	210	216
663	683	703	724	746	768	791	815	839	865	891	917	945
50	52	53	55	56	58	60	62	64	65	67	69	72
17	17	17	17	18	18	18	18	18	19	19	19	19
27	27	28	30	31	33	34	36	38	40	42	44	46
6	6	7	7	7	8	8	9	9	10	10	10	11
0	0	0	0	0	0	0	0	0	0	0	0	0
2,581	2,660	2,744	2,830	2,919	3,012	3,108	3,207	3,310	3,417	3,527	3,642	3,761
5,894	6,098	6,311	6,532	6,763	7,003	7,252	7,512	7,782	8,063	8,356	8,661	8,978

TABLE 10
OIL AND GAS EMPLOYMENT
1982-2000
INTERMEDIATE CASE

COUNTY NAME	General percentage of oil, gas or dryholes drilled based on 6-year trend			DEPTH RANGE	Wells drilled in 1982	Producing Wells in 1982	ACTUAL EMPLOYMENT	PROJECTED EMPLOYMENT				
EASTERN COLORADO	oil	gas	dry				1982	1983	1984	1985	1986	1987
Adams	52	11	33	6,500 to 7,000	290	1037	545	572	601	631	662	696
Arapahoe	34	5	60	6,600 to 7,600	68	194	119	123	126	130	134	138
Baca	40	44	53	3,300 to 4,600	21	156	36	37	39	40	42	44
Bent	1	29	70	4,000 to 5,400	8	33	14	14	15	15	16	16
Boulder	25	43	24	5,000 to 8,000	35	60	59	62	65	68	72	75
Cheyenne	42	4	55	4,200 to 5,700	31	97	55	57	58	60	62	64
Elbert	48	1	51	7,500 to 8,000	61	99	99	105	111	118	125	132
Fremont	20	0	80	3,000 to 4,000	3	35	7	7	7	8	8	8
Huerfano	2	15	75	2,500 to 5,200	1	1	2	2	2	2	2	2
Kiowa	16	15	69	4,700 to 5,400	28	90	42	43	45	46	47	49
Kit Carson	0	15	85	2,000 to 6,000	16	0	89	93	98	103	108	114
Larimer	77	3	20	4,000 to 6,000	16	118	33	35	36	38	40	42
Lincoln	24	0	76	3,000 to 7,500	5	2	84	91	98	106	114	123
Logan	11	8	81	4,900 to 5,200	46	263	67	70	74	78	81	86
Morgan	16	9	75	5,600 to 6,000	68	159	113	116	120	123	127	131
Phillips	0	36	64	2,600 to 3,000	7	2	6	6	7	7	7	8
Prowers	12	15	73	4,200 to 5,200	33	41	31	33	35	38	41	43
Sedgwick	10	16	58	3,000 to 5,500	4	3	6	6	6	7	7	7
Washington	10	14	76	4,200 to 4,600	127	477	158	166	174	183	192	202
Weld	43	35	22	5,900 to 7,300	390	2533	883	954	1,030	1,112	1,201	1,297
Yuma	0	61	39	2,300 to 2,800	202	357	214	216	218	220	223	225
Jefferson					0	0	0	0	0	0	0	0
Las Animas					3	0	2	2	2	2	2	2
				TOTAL	1,463		2,664	2,812	2,969	3,136	3,314	3,504
WESTERN COLORADO												
Archuleta	38	0	62	1,000 to 2,500	13	36	20	21	22	23	24	26
Dolores	30	4	65	4,200 to 6,900	14	15	46	48	51	53	56	59
Garfield	3	80	17	5,000 to 6,300	52	177	191	201	211	221	232	244
Jackson	50	5	45	1,000 to 4,400	23	120	41	42	43	45	46	48
LaPlata	9	82	9	5,000 to 6,700	65	832	390	410	430	451	474	498
Mesa	1	74	25	3,600 to 5,400	103	180	383	414	447	482	521	563
Moffat	14	32	54	5,100 to 7,200	42	241	318	328	337	347	358	369
Montezuma	20	10	70	900 to 3,500	38	48	127	133	140	147	154	162
Rio Blanco	21	59	20	3,800 to 5,500	192	1058	555	583	612	642	675	708
Routt	30	0	70	4,200 to 8,400	12	28	42	44	46	49	51	54
San Miguel	0	20	80	9,000 to 11,000	3	13	16	16	17	17	18	19
Delta					8	0	25	25	26	26	26	26
Montrose					2	0	6	6	6	6	6	6
Pitkin					0	0	0	0	0	0	0	0
				TOTAL	567		2,160	2,271	2,388	2,511	2,642	2,780
				GRAND TOTAL	2,030		4,824	5,082	5,357	5,647	5,956	6,284

Note: These figures are based on 1982 statistics and are only projections of future trends.

PROJECTED EMPLOYMENT

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
730	767	805	837	871	906	942	980	1,019	1,060	1,102	1,146	1,192
142	146	151	157	163	170	176	183	191	198	206	215	223
46	47	49	51	53	55	58	60	62	65	67	70	73
17	17	18	18	19	20	21	22	22	23	24	25	26
79	83	87	91	94	98	102	106	110	115	119	124	129
66	68	70	72	75	78	82	85	88	92	95	99	103
140	149	158	164	171	177	185	192	200	208	216	225	234
8	9	9	9	10	10	10	11	11	12	12	13	13
2	2	3	3	3	3	3	3	3	3	3	4	4
50	52	53	55	58	60	62	65	67	70	73	76	79
119	125	131	137	142	148	154	160	166	173	180	187	195
44	46	49	51	53	55	57	59	62	64	67	69	72
133	144	155	162	168	175	182	189	197	205	213	221	230
90	94	99	103	107	111	116	120	125	130	135	141	147
135	139	143	149	155	161	167	174	181	188	196	204	212
8	8	9	9	10	10	10	11	11	12	12	13	13
47	50	53	55	58	60	62	65	67	70	73	76	79
7	7	8	8	8	9	9	9	10	10	10	11	11
212	222	233	243	252	263	273	284	295	307	319	332	346
1,401	1,513	1,634	1,700	1,768	1,838	1,912	1,988	2,068	2,151	2,237	2,326	2,419
227	229	232	241	251	261	271	282	293	305	317	330	343
0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	2	2	2	3	3	3	3	3	3	3	3
3,706	3,922	4,152	4,318	4,490	4,670	4,857	5,051	5,253	5,463	5,682	5,909	6,145
27	28	30	31	32	33	35	36	37	39	40	42	44
62	65	68	71	74	76	80	83	86	89	93	97	101
256	269	282	293	305	317	330	343	357	371	386	402	418
49	50	52	54	56	58	61	63	66	68	71	74	77
523	549	576	599	623	648	674	701	729	758	789	820	853
608	656	709	737	767	797	829	862	897	933	970	1,009	1,049
380	391	403	419	436	453	471	490	510	530	551	573	596
170	179	188	195	203	211	220	228	237	247	257	267	278
744	781	820	853	887	922	959	998	1,038	1,079	1,122	1,167	1,214
56	59	62	65	67	70	73	75	79	82	85	88	92
19	20	20	21	22	23	24	25	26	27	28	29	30
27	27	28	29	30	32	33	34	36	37	39	40	42
6	6	7	7	7	8	8	8	9	9	9	10	10
0	0	0	0	0	0	0	0	0	0	0	0	0
2,926	3,080	3,244	3,374	3,509	3,650	3,796	3,947	4,105	4,269	4,440	4,618	4,803
6,632	7,002	7,396	7,692	8,000	8,320	8,652	8,998	9,358	9,733	10,122	10,527	10,948

TABLE 11
OIL AND GAS EMPLOYMENT
1982-2000
HIGH CASE

COUNTY NAME	General percentage of oil, gas or dryholes drilled based on 6-year history			DEPTH RANGE	Wells drilled in 1982	Producing Wells in 1982	ACTUAL EMPLOYMENT	PROJECTED EMPLOYMENT				
EASTERN COLORADO	oil	gas	dry				1982	1983	1984	1985	1986	1987
Adams	52	11	33	6,500 to 7,000	290	1037	545	600	659	725	798	878
Arapahoe	34	5	60	6,600 to 7,600	68	194	119	125	131	138	145	152
Baca	40	44	53	3,300 to 4,600	21	156	36	38	40	43	45	48
Bent	1	29	70	4,000 to 5,400	8	33	14	15	15	16	17	18
Boulder	25	43	24	5,000 to 8,000	35	60	59	65	71	79	86	95
Cheyenne	42	4	55	4,200 to 5,700	31	97	55	58	61	64	67	70
Elbert	48	1	51	7,500 to 8,000	61	99	99	107	115	125	135	145
Fremont	20	0	80	3,000 to 4,000	3	35	7	7	8	8	9	9
Huerfano	2	15	75	2,500 to 5,200	1	1	2	2	2	2	2	3
Kiowa	16	15	69	4,700 to 5,400	28	90	42	44	46	49	51	54
Kit Carson	0	15	85	2,000 to 6,000	16	0	89	96	104	112	121	131
Larimer	77	3	20	4,000 to 6,000	16	118	33	36	38	42	45	48
Lincoln	24	0	76	3,000 to 7,500	5	2	84	92	102	112	123	135
Logan	11	8	81	4,900 to 5,200	46	263	67	74	81	89	98	108
Morgan	16	9	75	5,600 to 6,000	68	159	113	119	125	131	137	144
Phillips	0	36	64	2,600 to 3,000	7	2	6	6	7	8	8	9
Prowers	12	15	73	4,200 to 5,200	33	41	31	34	38	41	45	50
Sedgwick	10	16	58	3,000 to 5,500	4	3	6	6	7	7	7	8
Washington	10	14	76	4,200 to 4,600	127	477	158	169	181	194	207	222
Weld	43	35	22	5,900 to 7,300	390	2533	883	971	1,068	1,175	1,293	1,422
Yuma	0	61	39	2,300 to 2,800	202	357	214	238	264	293	325	361
Jefferson					0	0	0	0	0	0	0	0
Las Animas					3	0	2	2	2	2	2	2
				TOTAL	1,463		2,664	2,904	3,166	3,453	3,767	4,111
WESTERN COLORADO												
Archuleta	38	0	62	1,000 to 2,500	13		20	21	23	25	26	28
Dolores	30	4	65	4,200 to 6,900	14		46	49	53	56	60	65
Garfield	3	80	17	5,000 to 6,300	52		191	204	219	234	250	268
Jackson	50	5	45	1,000 to 4,400	23		41	43	45	47	50	52
LaPlata	9	82	9	5,000 to 6,700	65		390	417	447	478	511	547
Mesa	1	74	25	3,600 to 5,400	103		383	421	463	510	561	617
Moffat	14	32	54	5,100 to 7,200	42		318	334	351	368	387	406
Montezuma	20	10	70	900 to 3,500	38		127	137	148	160	173	187
Rio Blanco	21	59	20	3,800 to 5,500	192		555	611	672	739	813	894
Routt	30	0	70	4,200 to 8,400	12		42	45	49	53	57	62
San Miguel	0	20	80	9,000 to 11,000	3		16	17	18	19	19	20
Delta					8		25	25	26	26	26	26
Montrose					2		6	6	6	6	6	6
Pitkin					0		0	0	0	0	0	0
				TOTAL	567		2,160	2,332	2,518	2,720	2,939	3,178
				GRAND TOTAL	2,030		4,824	5,235	5,684	6,173	6,706	7,288

Note: These figures are based on 1982 statistics and are only projections of future trends.

PROJECTED EMPLOYMENT

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
966	1,062	1,168	1,227	1,288	1,352	1,420	1,491	1,566	1,644	1,726	1,812	1,903
159	167	176	185	194	204	214	224	236	247	260	273	286
51	54	57	60	63	66	70	73	77	81	85	89	93
19	20	21	22	23	24	25	26	28	29	31	32	34
105	115	126	133	139	146	154	161	169	178	187	196	206
74	77	81	85	90	94	99	104	109	114	120	126	132
157	170	183	192	202	212	223	234	246	258	271	284	298
9	10	10	11	11	12	13	13	14	15	15	16	17
3	3	3	3	3	3	4	4	4	4	4	5	5
56	59	62	65	68	72	75	79	83	87	92	96	101
141	153	165	173	182	191	200	210	221	232	243	256	268
52	57	61	64	67	71	74	78	82	86	90	95	99
149	164	180	189	199	208	219	230	241	253	266	279	293
119	131	144	151	158	166	175	183	192	202	212	223	234
151	159	167	175	184	193	203	213	224	235	247	259	272
10	10	11	12	12	13	13	14	15	16	16	17	18
55	60	66	70	73	77	81	85	89	94	98	103	108
8	8	9	9	10	10	11	11	12	12	13	14	14
237	254	271	285	299	314	330	346	364	382	401	421	442
1,564	1,721	1,893	1,987	2,087	2,191	2,301	2,416	2,537	2,663	2,797	2,936	3,083
400	444	493	518	544	571	599	629	661	694	729	765	803
0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	2	2	2	3	3	3	3	3	3	3	4
4,487	4,899	5,351	5,619	5,899	6,194	6,504	6,829	7,171	7,529	7,906	8,301	8,716
30	32	34	36	38	40	42	44	46	48	51	53	56
69	74	79	83	87	91	96	101	106	111	117	123	129
287	307	328	345	362	380	399	419	440	462	485	509	535
55	58	61	64	67	70	74	77	81	85	89	94	99
585	626	670	704	739	776	815	855	898	943	990	1,040	1,092
679	746	821	862	905	950	998	1,048	1,100	1,155	1,213	1,274	1,337
426	447	470	493	518	544	571	600	630	661	694	729	765
202	218	235	247	259	272	286	300	315	331	347	365	383
983	1,082	1,190	1,249	1,312	1,377	1,446	1,518	1,594	1,674	1,758	1,846	1,938
67	72	78	82	86	90	94	99	104	109	115	121	127
21	23	24	25	26	27	29	30	32	33	35	37	39
27	27	28	30	31	33	34	36	38	40	42	44	46
6	6	7	7	7	8	8	9	9	10	10	10	11
0	0	0	0	0	0	0	0	0	0	0	0	0
3,436	3,717	4,024	4,225	4,437	4,658	4,891	5,136	5,393	5,662	5,945	6,243	6,555
7,924	8,617	9,375	9,844	10,336	10,853	11,396	11,965	12,564	13,192	13,851	14,544	15,271