Factors Affecting the Market Value of the NMSU Corona Ranch

Introduction

Traditional Rocky Mountain ranches have become "pearls of great value". Scenic ranches with privacy, fishing and wildlife have vaulted in value and it has nothing to do with the value of the grass or livestock that might be produced on the ranch. It appears that a new type of land baron, the Wall Street moneyed and the computer-industry rich has driven this upward movement in value. People are buying ranches for personal reasons. While stocks pay dividends, they are just a piece of paper. Land is real. You can visit it, walk on it and enjoy it. Investors like the sense of place that comes from owning land in the country (Sands 1998, Henderson 2000).

These observations highlight the growing and changing investment demand for western ranches just before the substantial stock market decline in 2000. While the stock market is now dragging the real estate market remains strong, fueling a national obsession with real estate. As noted in a recent *Time Magazine* article "Average homeowners who bought in the '90s – not to mention those who have owned for decades – are now, like modern-day Clampetts, sitting atop newly discovered gushers of wealth." (Poniewozik 2005, p. 20).

The expectation of capital gains has been a major reason for ranch purchase. But, the desire to own rural land is about more than income earning potential and expectations of appreciating land values. The rural lifestyle is an important and additional reason for ranch purchase and investment. People desire to own rural properties for a place to recreate and relax. They desire to live in a rural environment, obtain and maintain the lifestyle of a farmer or rancher, and have an investment they can touch, feel, experience and enjoy (Pope 1987). Contrary to traditional beliefs, beef production and profit are now of only secondary importance. When asked about their purchase motivations, farmers and ranchers list the lifestyle and social fulfillment they get from owning agricultural land properties as the primary reason for land purchase (Liffman et al. 2000, Gentner and Tanaka 2002, Rowe et al. 2001). A consequence of this lifestyle demand is inflated prices for western ranches to levels well above that justified from income earning potential.

In this paper we review the historic ranch economic situation and explore what part of the market value of New Mexico ranches is related to annual income earnings. We then review what is known about the type of people buying western ranches. We use ranch sales data compiled by Farm Credit Services (FCS) appraisers, and income appraisal data included with each sale, to evaluate which factors have influenced ranchland values. We define recent trends in value and highlight differences in value between deeded land ranches versus those that include vast acreages of public (Bureau of Land Management (BLM) and U.S. Forest Service (FS)) and state lands.

The Ranch Economic Situation

As noted over 30 years ago by Smith and Martin (1972), rates of return from livestock operations are low by any standard investment criteria, and well below comparable average non-agricultural rates [estimated to range from 5% to 9% by the American Agricultural Economics Association (AAEA 1998)]. This has not changed. Ranch returns excluding land appreciation are reported to be from negative amounts for small part-time ranches to about 3% for large commercial ranches. This range of returns is consistently reported by university and government studies throughout the U.S. Workman (1986) reported that only during a short period in the 1880s were livestock production returns exceptionally high (25 to 40%). Rates of return on nonfarm assets now dominate investment returns from agricultural assets, producing both a higher rate of return and lower risk

(Erickson et al. 2004). But, average rates of return as typically reported do not include estimates of land appreciation, the same capital gain that currently has homeowners and real estate investors gushing with new found wealth. Appreciating ranchland value has traditionally added a significant economic return. A common remark is that "farmers and ranchers live poor and die rich."

Agricultural land values steadily increased from the end of World War II through the 1960's and increased at a rapid pace during the 1970's and early 1980's (USDA various issues). There was a downward market adjustment in the 1980's. The market value of New Mexico ranches fell by over 50% from 1981 to 1988 (Torell and Doll 1990). We have now returned to an appreciating market but not all ranches are appreciating at the same rate.

Buyers and Motivations of Western Ranchers

Evidence suggests that recent ranch buyers are more likely to be lifestyle seekers than professional ranchers (Gosnell and Travis 2005). Sale listing materials with glossy scenic pictures are clearly geared to the amenity buyer. This marketing strategy is consistent with the stated objectives of recent ranch buyers. For many agricultural producers the desirable lifestyle attributes associated with rural living rank much further up the goal hierarchy than does profit maximization and income from crop and livestock production. But, the relative importance of profit and ranch income has varied from study to study, and it also varies from individual to individual.

With the objective of defining social and economic characteristics of western public land ranchers, Gentner and Tanaka (2002) conducted a west-wide mail survey of BLM and FS permittees. Western public land ranchers were grouped as either hobbyist (part-time) or professional ranchers. The goals and objectives of public land ranchers varied from a high ranking for lifestyle amenities for identified hobby or part-time ranchers, to a strong emphasis on profit for professional ranchers more dependent on ranch income. Gentner and Tanaka (2002) found that all types of public land ranchers ranked lifestyle attributes above profit maximization. All groups listed the complementary relationship between land ownership and family tradition, culture, and values as a primary reason for owning the ranch. Profit maximization was ranked in the middle of all possible objectives for ranch ownership. The survey indicated a nearly equal split with about half of the 1,052 surveyed ranchers depending on the ranch for less than 22% of disposal income and half depending on the ranch for over 80% of annual income.

Gosnell and Travis (2005) recently analyzed ranch ownership patterns by gathering land ownership and sales data from county tax assessors, private appraisers, and others familiar with agricultural sales in the study counties of Carbon County, MT, Sublette County, WY, and Routt County, CO. Data were for the period 1990-2001 and included 229 ranch sales over 400 acres in size. While the authors felt the study counties reflected conditions in the Rocky Mountains, with close proximity to Steamboat Springs, CO and to Jackson, WY the counties of Sublette, WY and Routt, CO are not representative of many rural western counties. Carbon County, MT was a rural agricultural-based county with 97% of its land designated as agricultural.

With the aide of a panel of individuals familiar with the agricultural communities and ranch purchasers in the study area, Gosnell and Travis (2005) broadly classified the goals of each purchaser as:

1) *Traditional Rancher*	Full-time owner operator deriving the majority of income from raising livestock
2) *Amenity Buyer*	Purchases ranch for ambience, recreation, and other amenities, not primarily for agricultural

	production
3) *Corporation*	Ranch purchased to function as a unit in a larger network of related operations and holdings. Ranch is operated with a ranch manager.
4) *Developer*	Buys the land with the intention to subdivide and resell.
5) *Other*	Other classifications used by Gosnell and Travis (2005) including *Investors, conservation organizations, part-time ranchers, land agencies, and others*

Traditional ranch buyers motivated by profit and income from the ranch purchased 20% of the acreage in the rural Carbon County (Figure 1). Acreage purchased by traditional ranch buyers amounted to only 7% in Routt County. For Routt and Sublette Counties, as would be expected, the majority of the acres purchased (>60%) was from buyers primarily interested in the recreation and lifestyle benefits of the purchase.

As Gosnell and Travis (2005) note, with little evidence other than anecdote and observation, some have argued that not only is the type of ranch buyer changing from the traditional cowboy to an amenity buyer, but also western ranches are changing hands at an unusually high rate and in a fashion that will substantially change the structure of ranch ownership relative to the 50/50 split reported by Tanaka and Gentner (2002). It is commonly believed that once a long-time family ranch sells it will soon appear on the market again and it will be managed and operated by an absentee owner. These new faces substantially change the social structure and values of rural communities.
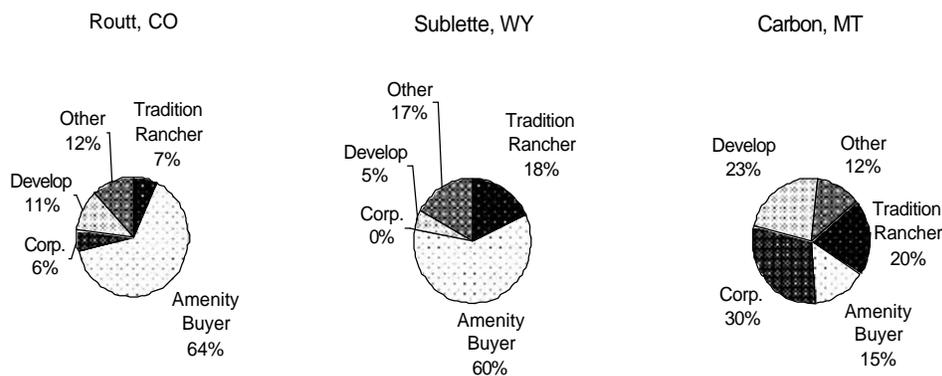

Figure 1. Percentage of Acreage Sold by Buyer Type (Source Gosnell and Travis 2005).

The Market Value of New Mexico Ranches

To explore the factors determining the market value of New Mexico ranches, we used what is called a "hedonic model". As described by Taylor (2003) the hedonic method is an indirect valuation method whereby we do not observe the value consumers have for a characteristic directly, but rather we infer the value from observable market transactions. With specific application to the ranch real estate market, ranches are heterogeneous with differentiated characteristics. Variation in ranch characteristics results in variation in ranch prices within the real estate market and a hedonic regression model can be used to estimate how ranch prices varied as ranch characteristics varied.

A detailed description of the hedonic model and the ranch sales data used in this analysis is available at the website http://ranval.nmsu.edu (Torell et al. In Press). It is important to note that the functional form of the regression equation is non-linear. This means that the marginal value of price-influencing factors will be different for different ranches. Marginal values are not constant as they would be for a linear equation. The non-linear hedonic model includes a scaling factor that will vary between 0 and 1. Marginal changes are estimated by multiplying this scaling factor times regression parameters estimated in the model. The scaling factor will be close to zero for relatively low-valued ranches, like those highly dependent on public lands[1] for grazing capacity, and close to one for pristine, deeded mountain ranches with wildlife. The estimated marginal value of altering a particular characteristic will vary between 0 (no change in the market value of the ranch) and the estimated regression parameter.

The hedonic model explained over 93% of the variation in per acre sale prices for the study ranches. Explanatory variables included annual agricultural and wildlife income; the value of houses and buildings, ranch size, elevation and roughness; distance to town, rangeland productivity (AUY[2]/Section); ranch location; time of sale; and the percent of the land area comprised of deeded, state and public lands.

New Mexico ranch sales information used in the analysis was collected from a sales database maintained by Farm Credit Services (FCS), and included 492 sales negotiated between January 1996 and December 2002. FCS appraisal data sheets include extensive information about each documented sale, including financial terms of the sale; ranch location; acreage and livestock carrying capacity by land type; the value of real property such as houses, buildings, and major structural improvements; and FCS appraiser estimates of income earning potential. Income appraisals included estimates of annual crop and livestock income, wildlife income, potential rental income of facilities and housing, and occasionally income from surface minerals like sand, gravel and caliche. All comparable sales located and documented by FCS appraisers were included regardless of FCS loan involvement with the sale.

To provide a specific example of value estimation we used the hedonic model to consider how selected ranch characteristics influence the market value of the New Mexico State University research ranch located approximately 10 miles east of Corona, NM. The research ranch is representative of many "ordinary" New Mexico ranches. It is remote. It has about 35% of the total acreage on state and BLM land, and it has a yearlong grazing of about 550 Animal Units Yearlong (AUY) on 28,146 acres (44 sections) of land for an average productivity rating of about 12.5 AUY/section. The market value of other types of ranches is also noted to clarify and emphasize the substantial range in market values observed in New Mexico.

Figure 2 shows the data input screen that defines characteristics for the NMSU Corona Ranch. Reported ranch value estimates at the bottom of the screen include $ total, $/DAC ($/deeded acre), $/TAC ($/total acre including BLM and state acreage), and $/AUY ($/Animal Unit Yearlong). The hedonic model (RANVAL2003) used in the analysis is available at http://ranval.nmsu.edu. Unless otherwise noted, the ranch value estimate used and described in this report is for January 2003.

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[1] We refer here to state trust land, BLM land and U.S. Forest Service land as "public land". We recognize that state trust lands are not public land but use this reference for convenience.

[2]/ An animal unit (AU) is considered to be one mature cow with calf or its equivalent. An Animal Unit Month (AUM) is the amount of forage required by an AU for one month. An Animal Unit Yearlong (AUY) is the forage requirement for an AU for the year. A cow unit represents one mature brood cow.

During 2004, ranch income from deer and antelope hunting leases totaled $58,000 ($1.85/acre). The hunting lease agreement with L & L Hunting Services in Victoria, TX allows for 40 hunters at $1,350/hunter for a total of $54,000. Additional payments are made if trophy animals are harvested. Wildlife income during 2004 was $58,000. The annual average value of livestock production on the Corona Ranch is estimated to be $57,420 ($1.58/acre), an amount similar to hunting income.

Corona Range and Livestock Research Center

Land Base	Number of Acres	AUY	Percent of Acres	AUY/Section	Grazing Fees $/AUM	Over 90% Public or state Land?
Deeded Land	18,118.0	354	64.4%	12.5		
State Trust Land (State)	7,188.0	140	25.5%	12.5	3.80	
Bureau of Land Management (BLM)	2,840.0	55	10.1%	12.5	1.35	
U.S. Forest Service (FS)	0.0	0	0.0%	0.0	1.35	FALSE
Irrigated Land (Included Above)	0.0	0	0.00%	0.0		
Dry Cropland or CRP land (Included Above)	0.0	0	0.00%	0.0		
Total	28,146.0	550	100.0%	12.5		
Number of Sections	44.0					

Miscellaneous Input	Total	$/Acre
Appraised Value of Houses, Buildings & Facilites ($ Total)	$258,683	$9.19
Roughness Coefficient	0.0	
Elevation at ranch headquarters (feet)	5,797.0	Follow this link to get elevation and roughness values
Distance to Trade Center	92.0	
County	Lincoln	
Population Density (People/ sq. mile)	4.00	
Major Land Resource Area (MLRA)	Area 1 - Pecos - Canadian Plains and Valleys	

Graphical Locater Home Page

Graphical Locater Home Page USA map XY– data TRS– data Montana State University Environmental Statistics Group USF&WS USDOE

Annual Income Earnings	Gross Income	Expenses	Net Income	$/Acre	$/AUY	$/AUM
Livestock (550 Animal Units Yearlong)	$57,420	$13,046	$44,374	$1.58	$80.68	8.70
Wildlife	$58,000	$5,800	$52,200	$1.85	$94.91	
Other	$0	$0	$0	$0.00	$0.00	
TOTAL	$115,420	$18,846	$96,574	$3.43	$175.59	
Management Charge	$5,771					5.00%
Maintenance Charge	$5,771					5.00%
Other Ranch Expenses (e.g. taxes, insurance)	$0					
Grazing Fees	$7,304					
Total Ranch Expenses	$18,846			$0.67	$34	
Net Annual Earnings	$96,574					

Nominal ranch Value	$ total	$/DAC	$/TAC	$/AUY	Annual % Change 1/1/1989 to 1/1/2003
Estimated ranch value on 1/1/1996	$1,876,565	$103.57	66.67	$3,412	
Estimated ranch value on 1/1/2003	$2,227,188	$122.93	79.13	$4,049	2.48%

Figure 2. Hedonic Model Input for NMSU Corona Ranch.

Recent Trends in Ranch Values

The Corona Range and Livestock Research Center was purchased as two separate ranches in 1988 and 1990 for a combined purchase price of $1.62 million ($89.50/DAC, $57.61/TAC, $2,948/AUY). In Figure 3, consider January 1996 as a starting point. The estimated nominal value of the Corona Ranch increased to a peak value of $2.49 million by January 2002 and decreased back to $2.23 million by January 2003. The average rate of appreciation from 1996 through 2002 was 2.48%, expressed as a compounded annual rate. This rate is equal to the average historical rate of return reported from livestock production on western ranches. Further, just as appreciation rates have been different in different housing markets (Poniewozik 2005), rates of ranch appreciation have also varied for different types of ranches. These differences are described in more detail below.
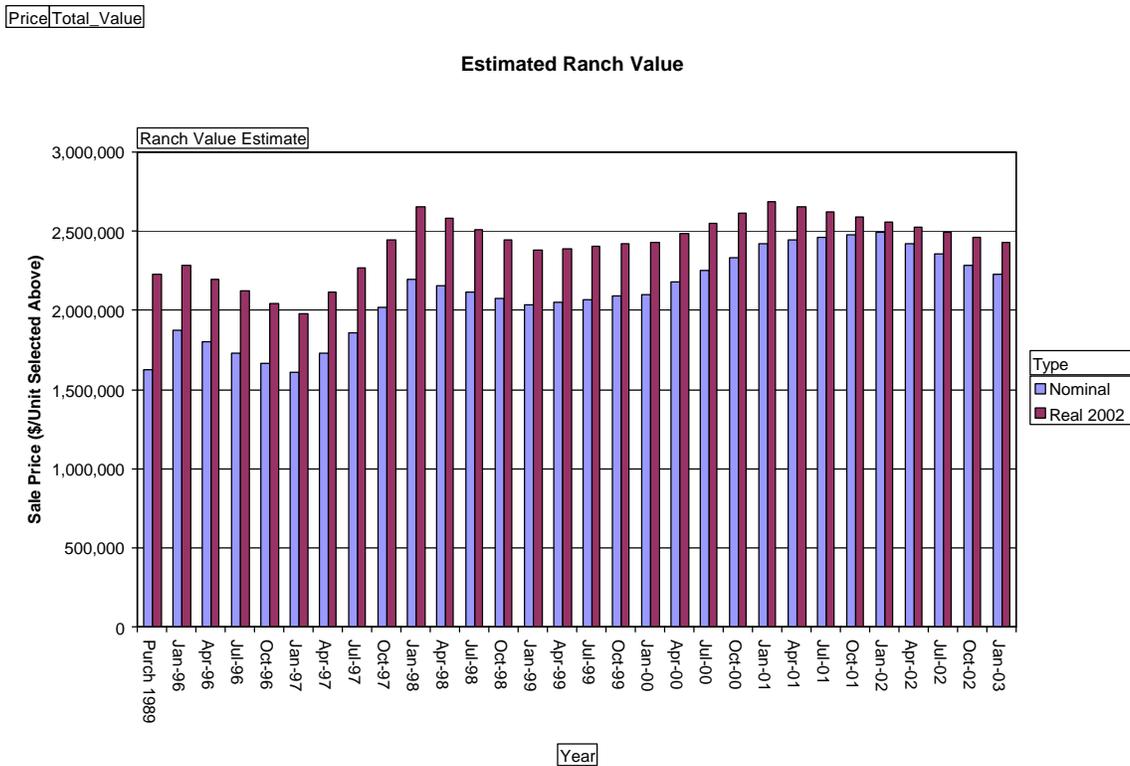
Price | Total_Value

Estimated Ranch Value

Ranch Value Estimate

Figure 3. Estimated Market Value of Corona Ranch, 1989 - Jan. 2003.

Factors Affecting Ranchland Values

Ranch Location, Distance and Topography

Topography, elevation and vegetative characteristics vary greatly across New Mexico and the Major Land Resource Area (MLRA) classification of the National Resource Conservation Service (NRCS) attempts to capture these differences (Figure 4). Elevation and roughness are obviously higher in the mountains. The most productive rangelands are on the plains of northeastern New Mexico (Stuckey and Henderson 1969) and the highest percentage of leased public lands is for BLM ranches in the southern deserts and FS ranches in the mountainous areas. These differences explained much of the regional variation in ranch sale price. Consistent with desired amenity values of greenness and scenic views, a dummy variable for location in the mountains was statistically significant and ranches located in the mountains sold for at least $100/acre more. Ranch location on the flat windswept High Plains reduced average real ranch selling price by about $25/acre, relative to ranches located in the adjacent Canadian Plains area.

Ranch elevation was found to have a positive impact on ranch value, and to influence value as the natural log of elevation. This suggests, as ranch elevation increases, sale price increases, but at a decreasing rate. Variation in elevation is measured as the standard deviation of surrounding sections and is reported as a roughness index at the Graphical Locator Website (http://www.esg.montana.edu/gl/). Increases in the roughness
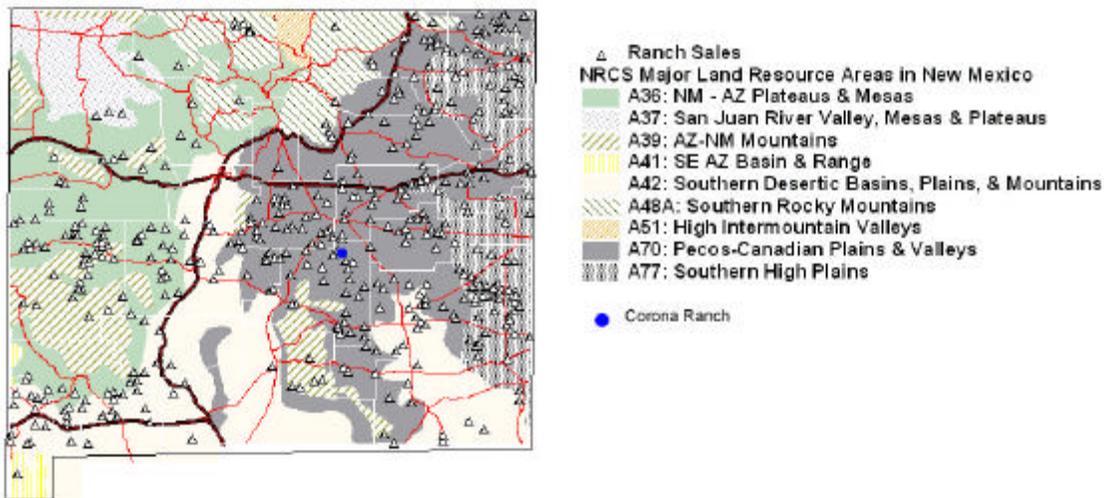
Figure 4. NRCS Major Land Resource Areas and Location of Study Rnaches.

index increased ranch sale price. The conclusion is that ranches high in the mountains with rougher terrain sell for more than those that are lower in elevation and flatter. This is contrary to what would be expected if raising livestock were the primary motive for ranch purchase.

Consider how ranch value changes as topography and elevation are changed on the Corona Ranch. The ranch headquarters (originally called the Nalda Ranch) is located at Township 1S, Range 16E, Section 4. The elevation at this point is 5,797 feet and with a flat terrain. If the elevation increased by 500 feet the value of the ranch would increase by $148,233 ($5.27/TAC). If the roughness index increased from zero to the 3.4, the average reported across all study ranches, ranch price would increase by $61,385 ($2.18/TAC).

As would be expected, an increasing distance to a major trade center was found to decrease ranch sale price. Using a rule that could be described as the "Walmart Rule" we included distance to a major trade center as an explanatory variable in the hedonic model. The Corona Ranch is located 92 miles from Santa Rosa, NM. If the distance was only 72 miles the sale price of the Corona Ranch would increase by $112,779 ($4.01/acre). If the ranch was located at the trade center, sale price would increase by $22/acre.

People like living next to other people, at least at the population densities found in New Mexico. The Corona Ranch is located in Lincoln County, NM which had a population density in the 2000 Census of 4 people per square mile. If the ranch was moved to Chaves County (Roswell, NM) with a population density of 10 people per square mile, the value of the ranch would increase by $74,038 ($2.63/acre). If the ranch was moved to Catron County, the least populated county in the state at 0.5 people per square mile, the value of the ranch would decrease by -$40,545 (-$1.44/acre).

Ranch Size

Larger ranches sell for more in total but less on a per acre basis. Per acre price was found to decrease as the natural log of the deeded sections included with the sale. This suggests the per acre decrease in ranch sale price is at a decreasing rate. If the Corona Ranch were half as big in acreage (22 sections instead of 44 sections) and had half the number of livestock and half the amount of wildlife income the total value of the ranch would decrease by 53%. Per acre price would increase from $79/TAC for the existing ranch to $83/TAC for the smaller ranch. If ranch size was similarly decreased to 1/4th the current size (11 sections) per acre price would increase to $91/TAC.

Amount of Public and State Land

The mix of deeded, state, BLM and FS land included on a ranch is a major factor determining market value. As shown in Table 1, if the percentage of public and state land on the Corona Ranch were increased the market value of the ranch would decrease. Public lands contribute less value than do deeded lands and the contributory value of the grazing permit depends on the type of ranch.

Consider how the estimated market value and rate of ranchland appreciation for the Corona Ranch would change if the amount of state and public land on the ranch were different. If the Corona Ranch included only state and BLM land the ranch would be worth $608,409 ($1,106/AUY) and the estimated average nominal rate of land appreciation would be 0.80% per year, a nearly constant amount (Table 1). If, at the other extreme, the Corona Ranch included no state or BLM land, and remained the same size and productivity, this 100% deeded land ranch would have sold for over $3.75 million ($5,304/AUY, $133/DAC) in January 2003 (Table 1). The appreciation rate from 1996 through 2002 would average 3.68% per year. Pristine ranches high in the mountains, closer to Santa Fe and Albuquerque and with scenic views and recreational opportunities more spectacular than the Corona Ranch realized rates of land appreciation over the study period ranging from 8 to 9% per year (Torell et al. In Press).

New Mexico ranch appraisers have traditionally used ratios ranging from 0.20 to 0.33 to value public land acreages (Torell and Doll 1991). That is, they value public and state

Table 1. Estimated Market Value and Rate of Land Appreciation for Corona Ranch with Different Amounts of Public and State Land, Jan. 1996 to Jan. 2003.

Amount of Public and State Land[1]	Total Estimated Ranch Value		Annual Nominal Appreciation Rate	Annual Real Appreciation Rate
	Jan-96	Jan-03		
100% public and state land	$608,409	$643,427	0.80%	0.29%
75% public and state land	$1,163,146	$1,295,485	1.55%	0.50%
Actual - 35% public and state land	$1,876,565	$2,227,188	2.48%	0.89%
25% state land	$2,220,555	$2,711,740	2.90%	1.09%
100% deeded land	$2,917,101	$3,757,109	3.68%	1.47%

[1]/Acreage of state land was held constant at 7,188 acres except for the 100% deeded land scenario.

lands at 1/5th to 1/3rd that of deeded land. They typically estimate this ratio by comparing ranch sales with little or no public land to those that are almost totally public land. The 100% deeded versus 100% public land ranch value estimates reported in Table 1 suggest a ratio of $0.608M/$2.917M = 0.21 during 1996 and 0.17 during 2003. The relative market value of public land permits has decreased with more restrictive and controversial land use policies being implemented on these lands (Torell and Doll 1991).

The contribution of federal and state land grazing permits to ranch value is of continued interest with the on-going debate about the desired management of public lands. The contributory value (marginal value) of a section of land of different ownership types is easily estimated by altering the model inputs shown in Figure 2. Consider the value of adding an additional section (640 acres) of deeded land and the accompanying 12.5 AUY/section of livestock grazing capacity. With this addition the estimated January 2003 market value of the Corona ranch would increase by $106,964 ($167/deeded acre added).

One would expect that with the addition of state and federal land acreages there would be a corresponding increase in estimated ranch value, but this is not necessarily the case. Two contrary effects are important. First, increased livestock carrying capacity and added agricultural and wildlife income from added acreages will increase ranchland value. But, public and state trust lands are discounted (relative to deeded land) and the added discount as leased acres are added may more than offset the positive grazing value. This is especially true for ranches that are comprised of a high percentage deeded land.

Consider again the Corona Ranch. An additional section of state trust land would add $55,803 ($87.19/added acre). The estimated discount (reduction in value relative to deeded land) for BLM and FS land was estimated to be over twice that of state trust land (Torell et al. In Press). The discount is enough, in fact, that adding another section of BLM land to the Corona Ranch is estimated to decrease market value by -$21,978
(-$34.34/acre added). As further detailed by Torell et al. (In Press), model estimates suggest that the contributory value of federal and state trust land is different depending on the initial amount of public land on the ranch. An additional acre of BLM or FS land adds value of about $20-30/acre to ranches that are no more than 30% deeded land to begin with, and this contribution depends very little on the livestock carrying capacity of the added acreage. Adding BLM and FS land to a ranch that is over 40 to 50% deeded land decreases market value. Similarly, adding state trust land to a ranch that is over 75% deeded land decreases market value.

Sunderman and Spahr (1994) similarly concluded that BLM and FS permits in Wyoming diminish ranch price when a small amount of public land is included on the ranch. There are a number of reasons why adding public land to a high percentage deeded land ranch might decrease value. The bureaucratic red tape and hassle of dealing with land agencies and anti-grazing activists is a growing concern and expense for public land ranchers. The lack of control and the inability to stop outsiders from entering the ranch is another obvious reason.

Recent proposals by environmental groups are to use public funds to pay ranchers $175/AUM for grazing permits as a way to eliminate grazing on public lands. The contention is that this is a lucrative offer given that the average market value of these grazing permits is only $35 to $75/AUM (National Public Lands Grazing Campaign). As noted above, grazing permits contribute different amounts to different kinds of ranches, and the permit can actually detract from ranch value. Whether this $175/AUM buyout offer would be acceptable varies from ranch to ranch. As described in detail by Torell et al. (In Press), both public and deeded lands add land area, making the ranch bigger, and this adds the majority of ranchland value, not the added income from livestock. The total contributory value of grazing permits in New Mexico is about $175/AUM for ranches with high percentages of public land acreages, but little of this value comes from livestock grazing the public lands. A bigger ranch is better.

Ranch Income

The estimated January 2003 market value of the Corona Ranch was $2,227,188 (Table 1). Average net annual income from the 550 AUY of livestock on the ranch is estimated to be $44,374 (Figure 2). Removing this livestock income from the ranch reduced market value to $2,191,797, suggesting livestock income contributed $35,390 to the market value of the ranch. This is 1.5% of the estimated market value. However, livestock productivity of the ranch contributes to value in an additional way. Rangeland productivity as measured by the AUY/section carrying capacity of the ranch contributes a significant amount to ranchland value. Ranch buyers prefer a productive ranch covered with vegetation to one that is brush infested. When the 12.5 AUY/section average productivity of Corona Ranch is reduced in addition to livestock income, ranch value goes down by $423,239. Livestock

income and productivity on the ranch contributes 19% of total ranch value. Adding one more AUY of carrying capacity increased total ranch value by $1,331.

Removing the $58,000 in wildlife income from the model changed the estimated market value of the Corona Ranch from $2,227,188 to $2,138,772, implying a contributory value of $88,415. This is 4% of market value. Adding one more hunter at the current-contract rate of $1,350/hunter increased the market value of the Corona Ranch by $2,664.

Because the hedonic model is non-linear, the contributory value of livestock and wildlife income to ranchland value cannot be added together to arrive at the total value. If livestock and wildlife income ($96,574, Figure 2) are both removed, the $2.22 million dollar value of the Corona Ranch decreases by $483,179. Thus, income earning potential determines only 22% of total ranch value. Seventy eight percent of the value is determined by factors unrelated to ranch income. This highlights and documents the observations of Sands (1988). People are buying ranches for personal reasons unrelated to the ranch as a business. Variation in ranch income, while statistically significant, explains little of the variation in the market value of New Mexico ranches.

With a different more desirable ranch location with spectacular mountain scenic views, ranch value and the marginal value of increasing ranch income or improving the ranch would be substantially more. Consider, as an example, if the Corona Ranch were moved to Santa Fe County with pine trees, high elevation and close proximity to the Santa Fe/Albuquerque metroplex. The market value of the ranch would be 5 times what it is at the current location, 10 miles east of Corona, NM. The marginal value of adding one more $1,350 hunter would be $16,464 as compared to $2,664 for the Corona location. Adding a $5,000 bull elk permit would increase ranch value by nearly $100,000. But, these trophy ranches are limited and unique. Less than 5% of the New Mexico ranches studied would fall in this trophy category. Most New Mexico ranches are similar to the Corona Ranch.

House and Building Value

It would be anticipated that adding $1 of house and building value to a ranch would add a dollar or less to ranchland value. Structural improvements typically add something less than construction value. The NMSU Animal and Range Science Department would like to build an extensive $1.5 million educational center at the Corona Ranch. In addition to its educational role where students could study and gain field experience, the new building would serve as a hunting lodge. It is anticipated that net hunting income would potentially double with the addition of the lodge, because higher hunting rates would be possible with a more complete lodging and meal package provided. With these changes -- a doubling of hunting income and an added $1.5 million in house and building value -- the January 2003 market value of the Corona ranch would increase from $2.227 million to $2.752 million, or by $525,000. The implication is that for a ranch with the characteristics of the Corona Ranch, investment in structural improvements and buildings would return about 35¢ on the dollar. The marginal value of these structural improvements is estimated to be higher for higher valued ranches and would approach $1 return per $1 invested for trophy ranches (Torell et al. In Press).

Summary and Implications for Conservation Easements

Traditional appraisal procedures determine agricultural land value by recognizing that agricultural lands have market value because of the future income that can be earned. Yet, for many years a disparity has existed between the market value of rural lands and the income-earning or productive value of these lands. Smith and Martin (1972) recognized this disparity over 30 years ago and attributed the difference to expectations of capital gains and the desirable rural lifestyle made possible with the purchase of rural lands. The importance of this lifestyle benefit has now increased to where no more than 25% of the market value of New Mexico ranches is determined by income

earning potential. Ranch values are influenced more by recreation opportunities, ranch location and scenic views then from livestock income potentially produced. The majority of current ranch buyers desire income earnings from the ranch, but maximum profit is not the primary goal. They knowingly paid 5 to 10 times more than the ranch is worth as a business. They expect to see the ranch appreciate in value and they plan to visit it, walk on it and enjoy it. Many plan to live there.

Anti-grazing activists have long argued that the profit motive of ranchers and especially public land ranchers has degraded the western range. Consequently, western rangelands need protection from these welfare ranchers, or so says Jacobs (2005). With the evolving motives of western ranchers and the changing type of ranch buyers, rangelands may need a different kind of protection, and perhaps by comparison we will in the future be little concerned about the profit motive of the traditional cowboy. For the most part traditional ranchers have a long history of producing livestock and a long presence in rural communities. They know proper production techniques and they know rangeland management principles, though we do not profess they always practice them. This is not necessarily true for the new type of ranch buyer, "the Wall Street moneyed and the computer-industry rich". They can hire knowledgeable ranch and range managers but their motives of ranch purchase, their potentially short land tenure, and willingness to develop ranch properties may be much less desirable than what we experienced with the traditional ranchers of the past. The Gosnell and Travis (2005) survey found 10 to 20% of the study ranches were purchased for development (Figure 1). The Gentner and Tanaka (2002) survey found only half of the public land ranchers in the West depend on the ranch for a significant amount of their disposable income. Western ranches are not valued for the same things they used to be. Buyers of western ranchers are not the same people they used to be. Times are changing.

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