



## Hall-Widdoss & Co., Inc.

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May 5, 2006

Ms. Nancy Ortiz, Review Appraiser  
COTR, Office of Appraisal Services  
NBC, Appraisal Services Directorate  
2180 Harvard Street, Suite 380  
Sacramento, CA 95815

Chickasaw Nation Industries, Inc.  
ATTN: Ron Alfred  
4411 The 25 Way, Suite 200  
Albuquerque, NM, 87109

RE: Appraisal of 'Highly Fractionalized Interest' on Indian Lands

Dear Ms. Ortiz & Mr. Alfred:

We have completed our research concerning the "Appraisal of Highly Fractionalized Interests on Indian Lands" on the northern Great Plains (Nebraska, North and South Dakota). I, along with Mr. Hulm, have attached our conclusions and recommendations in accordance with the six (6) points identified in the CNI contract dated January 20, 2006.

Mr. Hulm and I contacted "Land Offices" on the Reservations listed in the contract to identify partial interest sales to disinterested third parties that could be classified as 'arms-length' -- with none found. We have included a summary of sixty-six (66) 'non-Indian' sales upon which our decisions are based. Data was gathered from twelve (12) states with considerable analysis involved with each. Overall, sales of partial interests support discounts from 0% to 94.5% -- and span over 30 years. In review, the market discounts for partial interests are substantial -- and have remained relatively constant through time.

Hall-Widdoss & Co., Inc.

John Widdoss, ARA, MAI

Jerry Hulm, ARA, MAI

## 1. Assignment Summary & Scope of Work:

The Office of Appraisal Services (OAS) of the U.S. Department of Interior is responsible for providing appraisal support to the BIA, OST, and the Tribes. The need for fractional interest valuations has existed for several decades -- and the Indian Land Consolidation Act (ILCA) was formed to purchase extremely small fractional interests on Reservations. The formula currently applied is a simple mathematical division of a 'value' of the fee estate by the number of allotted ownerships, and then applying the percentage of ownership for each individual Allottee. Further, no discount is applied to that fractional interest -- which is contrary to the normal sales activity or appraisal valuations in the private sector.

Hall-Widdoss & Co., Inc., of Spearfish, South Dakota, consisting of John Widdoss, *MAI, ARA*, and Jerry Hulm, *MAI, ARA* (Associate), solicited sales of non-Indian partial or fractional interests; plus searched regional counties in the surrounding states on an on-going basis. The information initially obtained and analyzed covered sixteen (16) states. In all, over 100 'arms-length' sales were examined; however, those involving extremely small parcels (less than 10 acres) were excluded. Additional sales from Florida, Pennsylvania, Idaho, and Louisiana were retained in-file, but generally consisted of citrus, complex timberland, fish propagation, commercial, and residential properties. The discounts from those sales generally follow the same pattern as the agricultural transactions summarized within this report.

The OAS contract or more specifically the subcontract between Chickasaw Nation Industries and Hall-Widdoss & Co., Inc., posed the following six (6) questions:

**A. Are fractional interests such as those on Indian lands traded in the private market, i.e. is there similar market data northern Great Plains of the BIA?**

Answer: Yes, I have documented 66 non-Indian sales, or transactions gathered from the private sector. An extensive search was also undertaken for sales on the northern Great Plains Reservations -- however, not a single "arms-length" sale was identified; nor did the past and current Chief Appraisers recall any that occurred during their employment with the BIA.

**B. If so, how are these interests valued by market participants?**

Answer: In the private sector, buyers generally have an understanding of area prices where 100% interests are sold. Prices of partial interests vary, depending on the interest size. Generally, there is a disproportionately high or increasing rate of discount, as the ownership percentage declines.

Example: A 100% whole interest may be worth \$500/acre. An undivided 50% interest may sell for \$175/acre (30% discount from its proportional price of \$250/acre); yet a 33% undivided interest may sell for only \$50/acre (70% discount from its proportional price of \$166.67/acre)

**C. Is the value based on economic factors as in *market value* or some other measure of value?**

Answer: My observation is most prices are based on adjacent land values. Some sales equate to productivity for grass or rangeland; however, some are simply adjacent to other land holdings, or are needed for access or some other factor to compliment existing ownerships. Cropland appears to have some apparent correlation to economic factors -- but so does the market. Simply, land in production-ag areas readily considers productivity as a primary valuation criterion. As a general market observation, cropland values have increased to a point commensurate with economic benefits, i.e., prices have 'stabilized' or have been moving upward at a slower pace than rangeland. Range has been subject to increasing 'recreational' market pressures outside the Reservation boundaries where prices are increasing at a rate faster than cropland.

**D. Should a discount be applied? If so, what should the discount be?**

Answer: Yes. The market is clear there is added cost associated with assembling one or more partial interests in an attempt to perfect 'clear-title' to any property. This is due in part to time, multiple legal documents and recording fees, etc. This is also known as the 'control premium' in professional business valuation circles.<sup>1</sup> Stated differently, a 20% partial interest should sell for much less than 20% of its total value given the lack of control and enormous liquidity problems, i.e., the 'sum of the parts' does not equal the whole.

From the data collected, it would appear there are only a few partial interest sales of less than 10% -- but generally, properties of less than 20% ownership have little chance of finding a market. There are exceptions, such as properties with high amenities (water, location, hunting, etc.), or those located in the path of potential development or higher uses. Otherwise, *undivided interests of less than 10%-20% simply are not marketable.*

Excessively small ownership interests are legal problems created by Reservation 'birth right' or family situations; however, there is no 'common market for those minority, or 'super minority interests' created as a result since only Indians can own land on Reservations. NOTE: this situation is vaguely familiar to 'family limited partnerships' and discounts observed from stock ownership in the business valuation arena.

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<sup>1</sup> Shannon Pratt's Control Premium Study: Business Valuation Resources LLC, FactSet Mergestat, LLC, Santa Monica, CA.

For purposes of my discussion, ownerships are generally classified as follows:

Super-Majority Interest	> 67%
Majority or Controlling Interest	> 50%
Equal, Co-Ownership (No Control)	50% - 50%
Minority Interest	20% to 50%
Super-Minority Interest	< 20%

Briefly, there is lesser discount for ownerships greater than 50% by comparison to ownerships less than 50%, i.e., there is an inverse relationship between the ownership percentage and magnitude of discount. Interestingly, there are twelve 50% ownership sales with discounts that varied from 25% to 65%; so, this becomes the beginning point in the analysis -- with an initial conclusion mid-point at 40% discount for an undivided 50% interest. From there, my recommendation is to develop a 'sliding-scale' for discount similar to:

<b>% Partial Interest</b>	<b>% Suggested Discount</b>
90	10
80	15
70	20
60	30
<b>50</b>	<b>40</b>
40	50
30	70
20	90+
10	Not Marketable

By adopting market discount behavior, i.e., discounting minority fractional interests by market standards -- the private sector has incentive to spend time and money to assemble majority ownerships; and create the opportunity to resell the combined interests at some future point for a profit. Without profit motivation, I can see no reason for anyone in the private sector to willingly or openly participate in any fractional interest acquisition program.

**E. Suggest appropriate methods for valuing the highly fractionated interests seen on Indian Lands. Should it be an appraisal completed by a qualified appraiser or some other administrative formula? Address the applicability of the Uniform Standards of Professional Appraisal Practice (USPAP) and apply proper appraisal practice and methodology in the analysis.**

Answer: A logical question emerges, i.e., what to do with ownerships of less than 10%-20%, because this represents the vast majority of the electronic 'appraisals' currently generated by the M.A.D. land valuation system -- which is referred to as 'M.A.D. Jr.' in the report (explanation to follow). From the market perspective, these 'super-minority' interests have *no market value*. However, if the object is to continue consolidating Tribal ownerships -- the most logical method is to view these as having 'nuisance value' and merely set an administrative fee. That 'threshold' may be \$50, \$100, or some other number, but the cost of administration -- compounded by the small size of each interest, appraisals on demand, etc., should be taken into account to address all 'soft costs' concerned before setting an appropriate 'minimum fee'.

Some caution should be exercised if an 'administrative fee', or 'minimum price', or 'nuisance price' is assigned for 'super-minority' interests -- because at some point in highly fractionalized ownerships, the sum of numerous 'administrative fees' could exceed market value of the whole.

Example: Assume 40 acres of vacant grazing land has a current market value of \$200/acre for 100% interest -- or \$8,000 total. Also, assume title is held by one hundred (100) equal and undivided owners, or 1% each -- and, that an 'administrative fee' of \$100 each is set. Then, the cost of acquiring those 1% interests would be \$10,000 (*\$100 each X 100 interests*) -- which exceeds the market value of the whole by \$2,000.

The example can be more convoluted if one assumes a mixture of 1%, 2%, 5% ownerships -- and that those total 40% of the whole; plus, the remaining 60% is split 2 or 3 ways. The question becomes, is you only going to set an 'administrative' or 'nuisance fee' for the super minority interests and how does that correlate to the 100% value?

**F. Recommendations for appropriate and fair methodologies that could be applied in solving this problem.**

Answer: See discussion above for 'super-minority interests' of less than 20. *For larger ownerships, i.e., greater than 20%, normal appraisals should be completed.* The reports should conform to USPAP -- where the 100% interest is appraised, then a proper market discount applied for the minority interest, and certified signature affixed in accordance with standards.

## 2. BIA Historical Valuation Method(s):

Since 1997, a significant volume of partial interest valuations on Reservations nationwide have been performed by the M.A.D. (Management Asset Distribution) System. Mr. Baker worked with Arvel Hale (University of Northern Virginia and former Chief Appraiser of the BIA) on set-up, design, and administration of the system -- referred to as 'MAD, Jr.', because the original system was designed to manage names, lease dates/terms, and payouts by ownership percentage that was later modified to perform land appraisals. The valuation portion, or 'Jr.', generated approximately 120,000 'electronic' appraisals in 2002 (no figures were available for 2003-2005; but the number of appraisals has not declined) within Nebraska, North, and South Dakota. Only 1,000<sup>+</sup> appraisals were performed during the same period by State Certified appraisers -- for full, or 100% ownerships. Depending on each Reservation, *roughly 85%- 90% of the ' appraisals' involve interests of 2%, or less -- most of which were 'Restricted Use Appraisals' signed by a Realty Office or Land Operations -- not a State Certified Appraiser as required by state law (Nebraska, North, and South Dakota); thus, not meeting USPAP standards.* Note, one of the appraisals viewed and held in-file on the Cheyenne River Reservation was a 0.0024371 percent (0.000024371 written as a decimal) interest with a valuation conclusion of 15¢. A 'valuation' at this minute level is not a reflection of market value.

M.A.D. Jr. was designed to utilize income as the basis for valuation, since the proponents indicated income was the only amenity of ownership. To estimate income, statistics from USDA and rental studies were performed by contract appraisers by Reservation -- in accordance with 25CFR 166.400 through 166.407 (contracted in 2006 on Pine Ridge, Lower Brule, Crow Creek, Cheyenne River, Standing Rock, and Fort Berthold Reservations), with the final rental rates set by Regional Appraisers based on productivity. Most leases are seasonal in nature (approximately 60%-75%), or cover the summer grazing season only. Thus, those seasonal rates were adjusted to reflect 'annual' rates -- typically by a factor of roughly 75%. From that point, preliminary rent conclusions are adjusted downward for various items set forth in 25CFR of the Code of Federal Regulations -- Chapter I (4-1-04 Edition; Paragraph F 166.501, Page 486) -- How are Annual Administrative Fees Determined?

- A. 3% administration or 'preparation fee' based on annual grazing rent; \$10 minimum and \$500 maximum. If a Tribe performs all or part of the administrative duties for this part, the Tribe may establish, collect, and use reasonable fees to cover its costs associated with the performance of administrative duties.
- B. 'Cash pre-payment' deduction, i.e., most private market rentals are paid monthly, or paid 50% at the beginning of the lease and 50% at the end, or when animals are removed. A 'present worth' calculation is made to market rental rates that are delay to equate to 100% cash payment at the front of the grazing period on Reservations.
- C. Fencing Deduction: Most private rentals include fencing provisions that are the responsibility of the owner, or lessor. On Reservations, the lessee must install and maintain fences; thus, this could be an added cost to rent land on the Reservations.
- D. Water: Most private rentals include livestock water provisions that are the responsibility of the owner, or lessor. On Reservations, the lessee must install and maintain water resources; thus, this could also be an added cost to rent land on the Reservations.

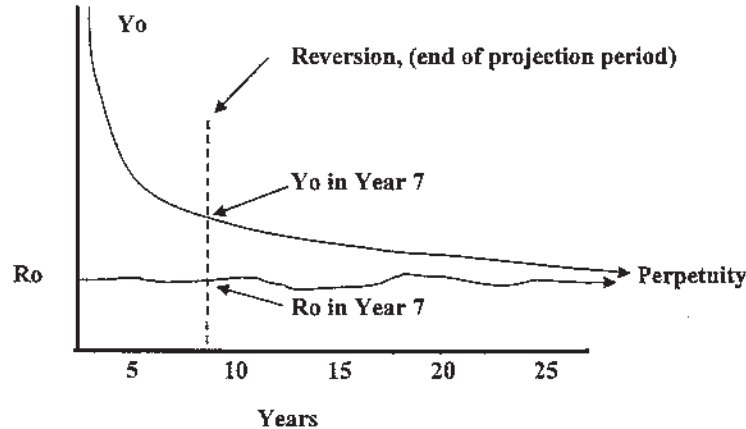
Once those deductions were made, a preliminary recommendation is prepared by the Regional Appraiser (Geoff Oliver in Rapid City, SD for this region). However, each preliminary rental price can be arbitrarily 'adjusted' by one of twelve (12) Regional Directors nationwide. In this case, the Regional Director is located in Aberdeen, SD -- and that individual sets the final rental rate -- a conclusion which may or may not be a reflection of market rent.

M.A.D. Jr. requires manual input if 'Land Operations' on each Reservation show a difference between the combined grazing and cropland acreages -- versus total size. For example, a 160-acre property may be inventoried with 100 acres cropland and 40 acres pasture; then a manual entry for the remaining 20 acres of 'missing' land is necessitated. Typically, the missing acreage was entered as 'waste'; then, Jr. projected a value based on the property's combined productivity.

Jr.'s valuation procedure is production-based where assigned annual rental amounts are discounted over a 7-year period to present worth through the use of *capitalization rates* (cap rates, or  $R_o$  below) \* as evidenced by local sales within each 'area'. The magnitude of the valuation problem is compounded because each Reservation defines a 'market area' differently, i.e., some have only a few 'areas' -- while others may have 50-60 'areas'.

### 3. Known Limitations of the M.A.D. Jr. Valuation System:

- A. The System actually appraises the 'leased-fee' interest; not fee simple. Further, it uses 'cap rates' to discount over the remaining or 7-year term of the contract -- rather than discounting with a 'property *discount* rate'.



The graphic is intended to show the relationship between the property yield rate (discount rate ( $Y_o$ )), and a capitalization rate ( $R_o$ ) using a 7-year scenario. By definition, the property yield rate ( $Y_o$ ) is *always* greater than the capitalization rate ( $R_o$ ) when the 'reversion' is part of calculation. Over time, overall capitalization rates ( $R_o$ ) tend to be static, i.e., or as net income increases, value increases and the relationship stays relatively the same (wavy line). The opposite is also true, or as income declines -- sale prices also tend to decline; thus, the capitalization rates varies little over time.

As the reversion (dotted line) is brought closer to today, or within a 20 to 25-year window shown by the example, the discount rate ( $Y_0$ ) is *always* higher. As one approaches 'perpetuity',  $Y_0$  and  $R_0$  tend to come together because the reversion is pushed outward to a point where it is insignificant within the calculation. Mathematically, there will always be a difference between the two rates; but at some point in the distant future -- the difference can only be expressed using several decimals.

With this basic understanding, utilizing a 'capitalization rate' to discount an income stream is simply incorrect procedure. The result of using the smaller 'cap rate' as the discount rate, *overstates values* -- even though the partial interests appraised are extremely small. *Therefore, M.A.D. Jr's land appraisal and/or undivided interest valuations are procedurally flawed -- and the BLA has been overpaying for all partial interests valued by this method.*

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- B. M.A.D. Jr. will allow valuation of a 100% interest, but would not allow a valuation of the full interest to print.
- C. Jr. defaults to individual's interest in the allotment, but does not allow for appraisal of smaller interest -- if needed.
- D. The System values larger parcels in the same manner as tracts containing less than 10 acres -- which likely have residential or commercial characteristics.
- E. No GIS support for productivity ratings; which promulgates inconsistency on all Reservations.
- F. No integration with Land Operations which is obligated to have a 'land inventory' of each allotment to account for 'missing' acreages. Land Operations should have current land inventories -- a key for solving future valuation problems, either through GIS productivity ratings and/or by 'land-mix' procedures typically employed in the private sector.
- G. There is no means of delineating between various types of leases on each appraisal, i.e., hunting (recreational), homesites, or specialty types within M.A.D. Jr.

A fundamental problem emerges because the Tribes can acquire undivided interests as funding becomes available. By contrast, rent payments are used to offset any purchase funded by ILCA -- with no monetary interest charged during the pay-back period. After purchase, the partial interest acquired is transferred to the Tribe. This program basically removes financial motivation because the fund never grows -- yet land prices continue to escalate (correspondingly, value of the partial interest increases); and the Tribe is ultimately the beneficiary of interest acquired with ILCA funds anyway.

The majority of the electronic appraisals performed by each Reservation have value conclusions of only a few dollars; thus, any attempt to invoke a minimum payment option -- say of \$50 to minimize administrative cost -- disproportionately depletes the ILCA Fund because it is repaid by an annual rental payment that is tied to the ownership percentage. Thus, without a monetary interest charge, it

may take several decades to repay any minimum charge from rental payments. In the example below, no matter what value per acre is used as a starting point, the current system of valuation and repayment will take at least 60 years to replenish the ILCA Fund, or 500 years -- say, if a \$50 minimum charge (administration or nuisance fee) is applied in this hypothetical example.

\$ 300.00	Per Acre Value of 100% Interest
x 2.00%	Value of 2% Undivided Interest
= \$ 6.00	2% Proportionate Value of Whole
<hr/>	
\$ 5.00	Annual Rental (\$15 AUM converted to \$/Acre @ 3 Acres/AUM)
2.00%	2% Undivided Interest
\$ 0.100	Annual Income to 2% Undivided Interest = 10¢
<hr/>	
\$ 6.00	Proportionate Value Calculated from 100% Interest
÷ \$ 0.100	=
60.00	Years to Replenish ILCA Fund from Rentals
<hr/>	
OR:	
\$ 50.00	Minimum Payment
÷ \$ 0.100	=
500.00	Years for Repayment

Please NOTE: Someone other than this contractor should study and recommend the final 'nuisance fee' or minimum charge -- I have only used \$50 for demonstration. It is my understanding ILCA is a revolving fund that was designated by the US Congress via the "Probate Reform Act" to acquire partial interests. The program has been funded as follows:

Year: 2004	\$21,000,000	(\$35,000,000 budgeted)	=	\$21,000,000
2005	\$34,500,000	Plus: \$10,600,000	=	\$45,100,000
2006	\$34,500,000		=	\$34,500,000
2007	\$60,000,000		=	\$60,000,000

If ILCA is funded in the amounts observed in the past, then taking 60-80 years to replenish the fund is not a concern -- *and minimum or 'nuisance' prices should be paid for small interests.*

Non-Indian buyers are not motivated to purchase partial interests on Reservations because the majority Indian owner(s) control who leases and/or operates the property. Also, the cash flow generated from leasing is below market or less than could be obtained from buying a partial interest off the Reservation. The land ownership situation is compounded since non-Indians cannot own Trust land on Reservations -- unless a Trust landowner has the property appraised, receives a patent; and then sells to a non-Indian. There is no economic means to partition and sell to anyone other than another Tribal member -- and they are not typically motivated to do so because of social reasons. ILCA essentially created 'non-market demand' for 'super-minority interests' and eliminated competition from Tribal members that may have purchased at a discount -- and assembled ownerships privately.

## Observations:

- A. Individual land ownership by Tribal members is subject to historical and social mores which are counter to most private sector motivations.
- B. There is no chance non-Indian buyers would acquire a partial interest on the Reservation, i.e., competition is relegated to other interest holders in the property.
- C. There is no incentive for the Tribes to independently acquire super-minority interests because ILCA does -- and the Tribes are the beneficiary of those purchases.
- D. There is no realistic financial mechanism to sustain the ILCA Fund internally because interest cannot be charged during the repayment period. Thus, one can only assume Congress will continue to fund the effort.
- E. The current process is too cumbersome, i.e., a potential buyer of a 'super-minority' interest must contact the owner; negotiate an offer/price; then complete the paperwork -- a process which can be replicated several times, depending on the number of outstanding interests in the same property.

In contrast, rarely does a private tract -- off Reservations -- have more than a few minority interests (typically less than two or three outstanding interests in any property).

## Conclusions:

- A. M.A.D. Jr's procedure to value partial interests is highly unusual from an appraisal standpoint due to volume and USPAP requirements -- which state the value of the whole, must precede any attempt to value a partial interest. The procedures in-place overpays for the interest acquired -- and reports something other than 'market value'. However, any Reservation land valuation solution must meet the same 'mass-appraisal' volume.
- B. I recommend appraising all ownerships each year using a 'market computer model' -- without regard to size of ownership. Regional or contract appraisers should collect, analyze, and set 'benchmark' sales for each 'area' or 'zone'; then adjustments made to each 'benchmark sale' in accordance with the subject's characteristics or based on productivity differences. For example, if the 'benchmark' had a 'zone value' of \$300/acre with a productivity rating of 0.4 AUMs/Acre -- and the property appraised was rated at 0.35 AUMs/Acre, the computer would automatically make a downward adjustment of 12.5% ( $0.4 \text{ AUMs/Acre} - 0.35 \text{ AUMs/Acre} \div 0.4 \text{ AUMs/Acre} = 12.5\%$ ) to a value of \$262.50/acre. That process meets USPAP standards since 'area/zone' sales were used; then a productivity adjustment made to each subject property.

Enabling GIS and/or productivity indexes (fixed to each property), coupled with Land Operation's inventory, would alternatively allow for rapid calculations and generation of market value opinions. The project could easily be certified by Regional Appraisers to meet USPAP requirements as a 'Restricted Use' report for each Reservation.

- C. Appraisals completed to USPAP Standards should be signed by a State Certified Appraiser. *Not by the Regional Director or Realty Officer.*
- D. A logical question emerges pertaining what to do with ownerships of less than 10%-20%, because this represents the vast majority of the 'appraisals' currently generated by M.A.D. Jr's land valuation system. *The most logical conclusion is to institute a minimum 'administrative fee' or 'nuisance value'.* The reasoning is relatively straightforward, i.e., interests of less than 20% are not marketable -- yet there are legal constraints which affirms you cannot 'take' an interest without compensation.

NOTE: The problem is severely compounded if the 'nuisance value' or 'administrative fee' concept cannot be implemented.

- E. Allow Reservation/Agency Superintendents to sell interests of less than 10%-20% -- if the buyer meets or exceeds the price set administratively.

*No market value  
- than admin. fee  
makes sense.*

#### 4. Valuation Fractional Interests -- Non-Indian Transactions:

Partial interest sales are scarce and rarely sell to third parties in the private sector. Thus, valuation of undivided partial interests in real property presents a difficult problem for appraisers. Traditional data sources do not provide information on partial sales. Also, there is limited appraisal education from directed toward this discipline; however, those available are limited in scope. "Many appraisers approach the problem by merely applying discounts to proportional ownership percentages, as indicated by historical cases. Such procedures are not based on, or derived from the market. Thus, the validity of those mathematical methods is questionable, if reporting 'market value' is the objective."<sup>2</sup>

Fractional, or partial, interests are defined as "divided or undivided rights of real estate that represent less than the whole".<sup>3</sup> Undivided partial interests are defined as "an interest in a specific property that is shared by the co-owners; no co-owner may unilaterally convey or encumber any specific part thereof".<sup>4</sup>

If any co-owner of an undivided interest in real property becomes dissatisfied with the current status of ownership, there are several options he/she has available to realize the value of the asset:

- 1.) Sell fractional interest.
- 2.) Seek voluntary partition.
- 3.) Demand court partition.

Under the sale option, fractional interests are difficult to sell on the open market. First, the transaction will likely require 'cash' or 'seller financing' because conventional financing is difficult to obtain. Thus, this factor limits the number of qualified buyers. Second, the owner of a fractional interest may have little say in the manner in which the property is being operated. Third, a fractional interest does not meet the requirements of a good investment, i.e., marketability, liquidity, and value as collateral.

The key characteristic of undivided partial interests includes the unique aspect of a 'shared right to occupancy'. All co-owners of undivided interests have the same right to occupy or use, i.e., an owner of a 10.0% interest has the same right to occupy as an owner of a 90.0% interest. Clearly, this shared right can lead to confusion and disagreement as to occupancy or use. "Further, most undivided interests are created without the benefit of any operating agreement between the various owners; thus, compounding or clouding the 'right-to-use' picture. This is contrary to most partnerships or corporate operations where methods of developing consensus or rights to control management and operational decisions are clearly defined. Without such documentation, operation of a fractionalized property can be difficult, contentious, and lead to litigation between the various interest owners."<sup>5</sup>

"Another negative aspect of a fractional interest is all undivided owners share in any liability resulting from property ownership. An equally unattractive characteristic is the difficulty, or inability, to borrow against the property. Few, if any, lenders will accept an undivided interest as collateral.

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<sup>2</sup> Valuation of Undivided, Partial, or Fractional Interests in Agricultural Real Property, Tony Correia, *ARA*, 2003, pg 1.

<sup>3</sup> The Dictionary of Real Estate Appraisal, Third Edition, 1993, Pg. 260.

<sup>4</sup> Ibid, Pg. 378

<sup>5</sup> Valuation of Undivided, Partial, or Fractional Interests in Agricultural Real Property, Tony Correia, *ARA*, 2003, pg 1.

Lenders will only accept if all co-owners sign documents offering 100%-interest as collateral. This aspect creates contentious situations when family members sign deeds of trust, offering their undivided interest in a property as collateral to facilitate a loan for the benefit of another family member, then default."<sup>6</sup>

The last characteristic of an undivided ownership is the 'right to partition'. State law provides an option whereby fractional interest owners may petition the court for physical division of the property. "This is distinct from the rights of a partnership interest or corporate stock, which do not enjoy such a right. The court can either call for a partition-in-kind, where the property is divided into separate parcels and distributed in equitable portions. Theoretically, each undivided interest owner then receives a 100% interest in separate parcels with a value equivalent to the pro-rata share of the owner's interest in the entire property. Such divisions are difficult; however, some property types do not lend themselves to physical divisions. If a physical partition is not possible or practical, the court will typically call for a sale with the net proceeds divided among co-owners on a proportionate basis. However, real estate markets are quick to recognize a 'forced sale', and such transactions may not achieve a price in accordance with its market value."<sup>7</sup>

Given the negative factors associated with partial or fractional interests, buyers are limited and prices typically discounted. Studies and case law addressing this issue reflect a wide range in discounts, due to the large number of variables that exist. I have reviewed the following publications:

- 1.) "Valuation of Undivided Interest in Realty: When Do The Parts Sum To Less Than The Whole?" by Anna C. Fowler from the Journal of Real Estate Taxation in the winter of 1986, Volume 13.
- 2.) "The Valuation of Partial Interests in Real Estate" by Don L. Harris, *ARA, MAI, SRPA*, Philip A. McCornick, *ARA, MAI*, and W. D. Davis, Sr., *ASA, MAI, SREA*, which appeared in the Journal of the American Society of Farm Managers and Rural Appraisers in October 1983, Volume 47 and the Valuation Journal of the American Society of Appraisers in December 1983, Volume 29, Number 1.
- 3.) "Valuation of Partial Interest" by Martin J. Healy, Jr. which appeared in The Appraisal Journal in July 1988, Volume LVI, Number 3. The article was the winner of "Manuscript Competition" of 1987 from the American Institute of Real Estate Appraisers. The subject of the article was a family partnership of less than 50%, subject to a written partnership agreement, and non-controlling. A discount of 40% to 60% was applied because it was not an equal ownership structure such as fee simple. The conclusion was "the sum of the parts of a partnership does not necessarily equal the value of the whole because of discounting effects established by market data and practices" on fractional interests.
- 4.) "Discounting the Value of Undivided Interests in Realty" by Bruce W. Bringardner in The Journal of Taxation in January 1990.

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<sup>6</sup> Ibid, Pg 2.

<sup>7</sup> Ibid, pg 2.

- 5.) The Appraisal Journal (October, 1993) reported the results of a survey regarding these factors. The study is entitled, "A Survey of Appraisers Regarding Factors in Discounting Partial Interests", written by C. F. Sirmans, John C. Doiron, Ksandra A. Guidry.

*This survey measured partial interest discounts for various levels of ownership in various types of properties, including a 100-acre family farm. Mean discount percentages reported for this 100-acre family farm ranged from a 22.94% discount for an undivided 1/10 interest, to a 16.86% discount for an undivided 3/4 interest.*

- 6.) "A Framework for Partitioning Jointly Owned Farmland", by Craig Jagger, Ph.D., published in the Journal of the American Society of Farm Managers and Rural Appraisers, October, 1987.

*.... "partitioning jointly owned property can be difficult under any circumstances. The difficulties increase when the value of the property is unstable, or when the partition involves emotional attachments (family estates)."*

- 7.) Appraisal Journal, October, 1994, Mark Thompson and Eggert Dagbjartsson - "Market Discounts for Non-Liquidity, Lack of Control, and Other Factors".

*Journal article discusses market discounts for non-liquidity, lack of control, and other factors, relying upon analyses of the secondary market for investment partnership interests.*

- 8.) Valuation Strategies, "Would You Buy an Undivided Interest?" Sept./Oct. 1998, Dennis Webb, *MAI, ASA*, and Gerald Lunn, Jr., JD.

*Article discusses valuation issues and techniques in some detail, and provides an extensive inventory of the negative aspects of undivided interests, as investments. Such studies of the market, or value of such partial interests, tend to focus on two major aspects of undivided interests -- control and marketability (or the lack of either). Major analyses often cited typically borrow from business valuation methodology, reporting discounts in a broad range of rates -- often showing discounts of 30% to 66%. These studies dissect sales of common stock in public companies, as offering the clearest, most quantifiable illustration of marketable, but minority, and thus, non-controlling, interests in business enterprises. Other studies have focused on sales of interest in Real Estate Investment Trusts, or real estate based limited partnerships, with the most recent comprehensive study in this arena indicating investors are purchasing such units at an average price-to-value discount of 38%, with these discounts varying widely with the type of partnership, property types invested in, and debt load from lows of 22% to highs of 66%.*

- 9.) "Undivided Interests and Partitions" -- The Appraisal of Rural Property text and joint venture by Appraisal Institute and American Society of Farm Managers and Rural Appraisers, 2nd Edition published 2000, Pages 427-436.

The first four articles cite court cases and sales data which have upheld discounts for undivided interests in real property. The market sales data in these publications is considered part of this analysis by reference and will be provided upon request. Item #8 is the most contemporary rural text on rural valuation issues. It discusses the market impact, i.e., lack of marketability, rights/obligations of the parties, etc. These studies typically address only sales of partnership interests, or common stock, and not undivided interests in real property; thus, these observations may not be directly translated to the valuation of undivided interests. As noted, previously, the distinguishing characteristic of an undivided interest in real property is the right to partition, and, thus, to access the underlying value of the real estate, a right not shared by interests in partnerships, or common stock in corporations. However, such analyses do serve to suggest these purchases of real estate partnership interests may provide some illumination of the rationale for appropriate discounts for minority interests in real property. The primary question to be addressed is what is the value of the remaining possessory rights of ownership and what control the interest holder has in operational decisions, acquisitions, disposal, transfer of profits, etc.?

Crop or ranching operations are management intensive. Simply, the level of management and expertise associated with an agricultural property is considerably higher than that required for a commercial building. Further, returns expected by a real estate investor consist of two types: return "on" and "of" capital. In a typical commercial building type, there is substantial cash-on-cash return (annual return on). For agricultural property there is limited, if any, annual cash-on-cash return; with the largest expectation from profit on resale through land appreciation. Annual rent from agricultural properties is disproportionately low by comparison to the size of the original investment.

Capitalization rates (relationship of net income divided by sale price) in the market area seldom exceed 1%-3% (cash-on-cash) for ranches engaged in livestock grazing, and 2%-5% for cropland units --- which are lower than even short-term government bonds. These low rates are a source of continual puzzlement to industry observers that hypothesize about "intrinsic" or "emotional" values enjoyed by the "cattlemen, the last of the true "rugged individualists" of the West". These low rates are also clearly impacted by the perceived stability of land values over time. However, the hypothetical buyer of an undivided interest is not likely to be such an individual, attracted to a native property by its esthetics and willing to accept a non-economic rate of return as the imbedded price for such non-economic physical characteristics.

## 5. Definitions -- What is Value? And, Value to Whom?

Before beginning, definitions must be reviewed.

**Market Value** "The most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the appraised property will sell in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress."<sup>8</sup>

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<sup>8</sup> The Appraisal of Real Estate, Ninth Edition, AIREA of the National Association of Realtors, Michael R. Milgrim, Ph.D and Karla L. Heuer, 1987, p. 19.

Value in Exchange

Simply, this is equivalent to the "willing buyer-seller concept" or "market-in-exchange" where value is detached and impersonal. "The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having knowledge of relevant facts".

Fundamental assumptions and conditions presumed in this definition are:

- A.) Buyer and seller are motivated by self-interest.
- B.) Buyer and seller are well informed and are acting prudently.
- C.) The property is exposed for a reasonable time on the open market.
- D.) Payment is made in cash, its equivalent, or in specified financing terms.
- E.) Specified financing, if any, may be the financing actually in place or on terms generally available for the property type in its locale on the effective appraisal date.
- F.) The effect, if any, on the amount of market value of atypical financing, services, or fees shall be clearly and precisely revealed in the appraisal report.

In addition to market value, the concept of investment value must also be understood.

**Investment Value** "the specific value of an investment to a *particular investor or class of investors* based on individual investment requirements; as distinguished from market value, which is impersonal and detached."<sup>9</sup>

The key to the discussion is the difference between "investment value" and "market value". Investment value reflects the subjective relationship between a *particular investor and a given investment or property*. Investment value is the price an investor would pay for an investment in light of its perceived capacity to satisfy individual desires, needs, or investment goals. Simply, we must ask "can we duplicate the specific criteria (and resulting prices) in the market for somewhat similar properties (estates) with similar risk?" In the subject's case, transfers to family or corporate partners tend to reflect investment value where the fractional interest has not been exposed to the open market and reflects the specific interest of the remaining fractional interest holder.

By contrast, market value is a "value-in-exchange" concept, or that amount of money for which the appraised estate or rights can be openly exchanged for in the market, not the value to a specific investor. Simply, this is a "free-standing" interest and the question becomes what would a knowledgeable buyer pay for the fractional interest given the limitations imposed by the language in the Trust Agreement?

In this assignment -- market value of fractional interests was sought and reported; NOT the value to the various Reservations, to the BIA, etc. -- including assemblage premiums which may have been paid to acquire a majority interest.

Investment Value

<sup>9</sup> Ibid. p. 17.

## 6. Data Collection and Analysis

The following individuals were contacted in an attempt to find 'arms-length' sales on Reservations in Nebraska, North, and South Dakota:

Agency	Realty Officer	Date Contacted	# Fractional Interest Sales
Cheyenne River	Bourland, Greg	3/1/2006	None
Fort Berthold	Wells, Tom *		
Fort Totten	White Mountain, Sheila	3/15/2006	None
Pine Ridge	Marshall, Frieda	3/3/2006	None
Rosebud	Compton, Harold **	4/4/2006	None
Yankton	Orozco, Deda	3/15/2006	None
Sisseton	Jordan, Carol	3/15/2006	None
Standing Rock	Iron Road, Barb	4/3/2006	None
Turtle Mountain	Cartwright, Valentine	3/15/2006	None
Winneabago	Pourier, Ernest	3/15/2006	None
Crow Creek	Lawrence, Frank	3/15/2006	None
Lower Brule	Olson, Armond (Red)	3/22/2006	None
Former Regional Appraiser	Baker, David	3/31/2006	None
Regional Appraiser	Oliver, Geoff	3/31/2006	None

\* Mr. Well's office was contacted six times; his message center was full and would not accept messages.

\*\* Mr. Compton was not available; after several attempts spoke to Wayne Colombe in Realty.

Dave Baker, former Regional BIA Appraiser and Geoff Oliver, current Regional Appraiser, were interviewed on March 30, 2006 in Rapid City, SD. Both individuals reported there were no known partial interest sales of Trust land for at least ten to fifteen years within the Great Plains Region.

Chickasaw Nation Industries (CNI with Regional Office in Aberdeen, SD) is currently facilitating the acquisition of partial interests on Pine Ridge and Standing Rock Reservations with ILCA 'buy-back funds'. Their site manager, Marty Earl, has been acquiring partial interests for CNI since August of 2002 with values generated by M.A.D. Jr. -- and has never seen an arm's-length sale. CNI's partial interest purchasing activity on Rosebud has been replaced by some other part of the local Agency.

### Non-Indian Partial Interest Sales:

I have included a summary of sixty-six (66) 'non-Indian' or private transactions which demonstrates the market's perception of prices associated with partial or fractional interest sales. The sales of partial interest transactions support discounts from 0% to 9% -- and span over 30 years.

Comparison #1:	160 acres	25% Interest	Nebraska	93% Discount
	<u>320 acres</u>	25% Interest	Illinois	
	<b>Total = 480 acres</b>			

This is a December 7, 1976; sale contained 160 acres in Polk County, Nebraska plus 320 acres in Knox County, Illinois. The sale was a 25% interest for \$20,000 to a disinterested third party. This

implies the 100% proportionate share would have sold at \$80,000. The tract had no buildings. Farmers National Company (FNC) managed both properties (Nebraska and Illinois) before, during, and after sale. FNC appraised the unencumbered 100% interest at \$1,000/acre for the Nebraska land, or \$160,000; and \$3,000/acre for the Illinois land, or \$960,000. The total fee estate would have had a market value of \$1,120,000. By comparison to the actual sale price of \$80,000, the 25% partial interest represents a 93% discount from fee values.

**Comparison #2:            160.00 acres    12.5% Interest   S. Dak.            62.5% Discount**

On September 15, 1989, a one-eighth interest (12.5%) in the NW4 of Section 11-T40N-R33W for \$450 (total) sold near Norris. This was an unimproved tract with a paved boundary (north) and gravel/dirt section-line on its west boundary. The implied value of the whole would be \$3,600 ( $\$450 \times 8 = \$3,600$ ). This represents a total of \$22.50/acre for the 160-acre parcel ( $\$3,600/160 \text{ acres} = \$22.50/\text{acre}$ ). Comparable fee land in the area during the same time-frame was selling near \$60/acre with all ownership rights and represents a 62.50% discount.

**Comparison #3:            158.08 acres    50% Interest   N. Dak.            25%-37% Discount**

This sale is a July 1981 transfer from Scrivner to Kinney containing 158.08 acres for \$950/acre. The sale is located in Grand Forks County and involved an undivided 50% interest. Four other sales in the immediate area sold from \$1,260 to \$1,516/acre between January 1981, and April 1981 that varied from 60 to 172 acres. These sales collectively show discounts from 24.6% to 37.3%.

**Comparison #4:            600.94 acres    23.33% Interest   Texas            41% Discount**

Lockhart sold a 23.33% interest in 140.2 acres from within a 600.94-acre tract to Murr and Hooks in 1983. Total consideration was \$49,077, or \$350/acre.

- A.) A similar property sold from Leon Thompson to Wishbone Cattle in 1984. This sale contained 1,032.15 acres and sold for \$595/acre. The sale contained improvements that contributed approximately \$40/acre or a land value of \$555/acre by subtraction. Land values in Texas increased between 1981 and 1984; however, without the time-adjustment, the undivided interest indicates a discount of 36.9%. The discount would be less after applying a time factor to the partial interest sale, or adjusting the 1984 sale to 1983 prices.
- B.) A second pairing occurred in 1983 from Paul Bryant Pringle to Gideon Distributing, Inc. This was a 642.59-acre tract which sold for \$550/acre. This sale is similar to the partial interest sale (Sale 4) containing 600.94 acres and supports a discount of 36.36%.
- C.) A third pairing occurred in 1981 from Charles D. Danforth to A. J. Smart. This was a 320 acre tract selling at \$643.75/acre. This is a smaller sale; however, the physical features were inferior to the partial interest property (Sale 4). This comparison shows a discount of 45.63%.

Adjustment for various items of dissimilarity between these three comparisons would likely narrow the range and demonstrate a discount above 39.6% -- rounded to 40% -- for the partial interests conveyed in the original 600.95-acre tract.

**Comparison #5:            393.54 acres       50% Interest   Texas                    > 26% Discount**

In 1989, Mary Gilliam sold 196.77 acres of undivided interest from within a 393.54-acre tract. This is a 50% interest with total consideration paid at \$85,000 or \$431.98/acre. This sale included a house and barn with an estimated contribution of \$25,000 resulting in a land value of \$60,000, or \$370/acre ( $\$85,000/50\% - \$25,000/393.54 \text{ acres} = \$368.42/\text{acre}$ ).

A sale in the same area sold for \$539.34/acre in 1988 from Ralph W. Noble to C. G. H. and P., Inc., containing 1,373.9 acres. This property also included buildings with a contribution estimated at \$55,000. This leaves \$500/acre for land only. Ignoring the size difference, which would make a larger discount, the indication is approximately 26% from this pairing.

**Comparison #6:            7,360 acres       20.4% Interest   Texas                    31.2% Discount**

Nettie R. Yeakel sold a 20.4% interest in a 7,360-acre tract in Sutton County, Texas in 1988 to R. L. Street. This was an unimproved ranch with an undivided interest covering 1,500 acres of the total. The sale price of \$935,000 computed to \$127/acre.

In 1989, William L. Galbreath sold an 8,865.141-acre ranch to Bill J. Cole which adjoined Sale 6 above on its northern boundary. This transaction sold for \$184.68/acre and included an old house with minimal contributory value. Comparing this sale to the Yeakel undivided interest, a 31.23% discount is shown.

**Comparison #7:            1,120 acres       40% Interest   Texas                    37%-62% Discount**

A March 1981 sale from Ella Beaty to Marvin Shurbet containing 1,120 acres in Crosby County, Texas. The seller could not convince other partners to sell; thus sold the 40% partial interest covering the entire acreage to an outside buyer for \$110/acre.

Three other ranches sold in the general area (within ten mile radius). After adjustments for size and time, adjusted indications were:

- A.) \$233/acre which computes to a discount of 53%;
- B.) \$177/acre, or a discount of 37%; and
- C.) \$289/acre -- a discount of 62%.

**Comparison #8:            3,984 acres       25% Interest   Texas                    75%-80% Discount**

This sale included a 25% undivided interest which was located in Collingsworth County, Texas that transferred from Dan Wheland to Donald Tarver in August 1980, selling for \$200,000 or \$50.20/acre. *The buyer owned the remaining 75% interest.*

- A). In May 1979, a tract containing 6,400 acres sold for \$250/acre from Kenny Wagner to Dennis Holt. This comparison shows a discount of 80%, i.e., \$250/acre versus \$50.20/acre.

B.) The second transaction sold from R.A. Lotspeich to Michael Blevins in June 1981 for \$230/acre. The sale contained 15,159 acres and shows a discount of 78%.

C.) This sale occurred in April of 1982 for \$200/acre containing 3,200 acres from Edwina Johnson to Kade Matthews. By comparison to the partial interest sale at \$50.20/acre, this transaction shows a 75% discount.

**Comparison #9: 12,631.96 acres 50% Interest Texas 27.2% Discount**

This was a July 1977 sale from Ora Adams Neill to John March containing 12,631.98 acres. This property is located in northwest Tom Green County, Texas, and involved an undivided 50% interest selling at \$94.65/acre. An appraisal was performed on a ranch adjacent (west boundary) on April 12, 1977, for \$130/acre (100% interest) which was also supported by other sales in the area. Thus, this transaction shows a discount of 27.2%.

**Comparison #10: 4,820.47 acres 66.7% Interest Texas 30% Discount**

This ranch is located in Uvalde County and contained 4,820.47 acres. Attempts to sell an undivided 66.7% (2/3rds) interest began in 1984. After two years and ultimate court proceedings, 3,429.27 acres of the original ranch was sold on April 21, 1986, for \$400/acre.

Sales in the area indicated prices should have been around \$500 to \$550/acre. This partial interest transaction reflects a discount of 20% to 27% -- plus the lost income of the sale proceedings for two years and the expense of partitioning and litigation. Thus, I reconciled to 30% discount.

**Comparison #11: 268.5 acres 12.5% Interest Texas 50% Discount**

This was a small tract of pasture in Wharton County with a 1/8<sup>th</sup> interest that sold from Renee and Melvin Epstein to Dee R. and Patsy McElroy in November 1972. The price was \$46.55/acre, which implies a full price of \$372.44 for the whole (100% interest). A nearby property containing 100.75 acres sold the same month for \$750/acre -- showing a 50% discount.

**Comparison #12: 438.94 acres 20% Interest Indiana 25% Discount**

This January 1978 sale had "typical farm improvements" located in White County, Indiana near Monticello. The sale was directed by the court to settle the estate of Lynn Robertson. The seller negotiated with other owners and ultimate buyer (Allen Orr) before selling for \$284.78/acre. This implies the full 100% interest was \$1,433.88/acre.

A reputable firm (Farmcraft Services, Inc.) appraised the full interest at \$1,900/acre prior to the sale. Mr. Orr thought the farm was worth at least \$1,850/acre -- yet most land in the neighborhood was selling in the \$2,000/acre range at that time. Using \$1,850 to \$2,000/acre, the comparison to the sale at \$1,433.88/acre varies from 22.5% to 28.3% discount -- reconciled at 25%.



**Comparison #17: 2,009.88 acres 12.5% Interest Montana 87% Discount**

This sale contained 2,009.88 acres of grazing land selling in March 1989 that was located in Prairie County. The buyer received grazing privileges for 189 AUMs on the Prairie Cooperative Grazing District (BLM) in addition to the transfer of 100% interest in 668.56 fee acres out of the total 2,009.88-acre sale. After accounting for the fee land and BLM permit, the discount for the 1/8<sup>th</sup> partial interest was 87%. The ownership rights for this undivided interest in fee and leasehold property was delineated by an "Agreement as to Land Ownership" covering use and sale of the individual AUMs and 'base lands'. The agreement further limits potential buyers due to a 'first right of refusal', i.e., to match any bid made by a "non co-owner". This is a complex sale with limited potential to market to any third party due to a 'first right of refusal'. This results in a higher discount than normal. The price and analysis will be held in file.

**Comparison #18: 1,085.31 acres 51% Interest Texas 30% Discount**

This sale was a mixed cropland and pasture unit with limited buildings of a 51.0077% undivided interest from a trust for \$130,000, or \$119.78/acre. The minority interest holder wanted to buy at a steep discount and warned potential buyers that they may be hard to get along with. Minority interest holder's son was also leasing the property. A neighbor bought the interest with discounting for possible court fight and other operational issues.

Based on appraisal of the unit in 1994, the market value was at \$363,145, or \$334.60/acre. This computes to \$170.67/acre for the proportional 51.0077% share. Compared to the selling price of \$119.78/acre, the discount was 30%. Partitioning costs were estimated at \$35,000± by buyer's attorney, or \$32/acre -- which would increase the cost and lower the indicated discount rate.

**Comparison #19: 114.7 acres 7.14% Interest Texas 49% Discount**

This tract consisted of 99 acres of abandoned cropland and 16 acres pasture with live oak trees approximately 1.5 miles west of Rochelle in McCulloch County. Leonard National Bank sold a 1/14<sup>th</sup> partial interest (7.14%) on May 3, 1988 which equates to 8.193 net acres at \$244.12/acre. There were no buildings but it was improved with perimeter fencing and stock tank. The property was on the market for five years; the buyer joined and was a professional appraiser.

The buyer submitted a written offer of \$2,000, at the seller's invitation, on March 22, 1985. The offer was accepted on April 11, 1988; all closing costs, except the recording of the instrument, were paid by the seller. The cumulative discount indicated by this sale is 49%, as shown below after the improvements were deducted -- an analysis provided by the buyer/appraiser.

8.193 Undivided Acres @ \$500/Acre (Fee) =	\$4,096.50
Less: Discount for an Undivided Interest @ 45%	<u>(1,843.43)</u>
Value of Land after Discounting	\$2,253.07
<i>Less: 1/14 Interest in Improvements</i> (\$3,500 Total Impt. Contrib. Value)	<u>( 250.00)</u>
Net Value of the 1/14 Undivided Interest	\$2,003.07

**Comparison #20: 1,690.18 acres 8.334% Interest Montana 63% Discount**

This sale is a sale of a 1/12<sup>th</sup> (8.334%) interest to Hunt Oil Company in Rosebud and Custer Counties in September of 2000. Sales price was \$109,861.48 for a 'net acreage' of 1,690.18 from within a total of 19,579.2 acres. The price converts to \$65.00/acre.

Based on a current appraisal, the total property would be valued in the range of \$3,350,000 to \$3,500,000 at that time, or \$171.10 to \$178.76/acre. By comparison to the price paid for the partial interest, the discount is shown from 62% to 63.6% -- reconciled at 63%.

**Comparison #21: 14,000 acres 50% Interest Montana 0% Discount**

This is an April 1996 sale of an undivided 50% interest in a 14,000+ acre ranch on the Musselshell River and associated BLM and Montana State leases. Sales price of the 50% interest was reported at \$1,100,000 while the value of 'fee' was shown by adjacent sales at \$2,200,000. Thus, the sale indicates no discount for the undivided 50% interest.

The buyer stated that they paid full list price since the other 50% interest owner had purchased the property for recreational and hunting purposes only and the buyer did not have to pay rent on the other 50%. Thus, this sale had economic recreational amenities to the buyer. A discount would have been likely if the other co-owner demanded income after the buyer-seller interviews.

**Comparison #22: 582.72 acres 50% Interest Montana 20% Discount-Family**

This May 1996 sale is located three miles north of Belt and has a mixture of dry cropland and grazing. There were some recreational influences in the area. The buyer (N. H. Browning III) purchased the 50% interest from his nephew for \$96,000. This is a family transaction where the buyer purchased the 50% below market. An appraisal on the property by an accredited appraiser estimated the value at \$240,000. 50% interest would equate to \$120,000 --- which indicates a discount of 20% for the partial interest.

**Comparison #23: 320 acres 50% Interest Montana 33% Discount**

This was mostly a dry cropland unit located in McCone County, or 14 miles southwest of Brockway. It sold in May of 1996 for \$26,750 or \$83.59/acre from Higby Parker to Arne Sutton.

The buyer had been leasing the property for several years. Cropland was selling at \$250/acre in this location -- which computes to \$125/acre for a 50% proportionate share. The discount from \$125/acre to \$83.59/acre paid is calculated at 33% discount.

**Comparison #24: 640 acres 70.83% Interest California 35% Discount**

Sale was 640 acres of dryland on the Carrizo Plains of eastern San Luis Obispo County in November of 1986. The buyer (Stern) was an investor who had made other partial interest acquisitions of agricultural and commercial property. Court ordered sale of 34/48<sup>ths</sup> interest in the Lottie King Estate of which this land was the only component.

Buyer indicated market value of the 100% interest was from \$340-\$400/acre. Sales available were in \$400-500/acre range, but in stronger locations. The 70.83% interest sold for \$170/acre, leaving an implied value of \$240/acre based on the buyer's estimate, or showing a discount from 29%-40% which I reconciled at 35%.

**Comparison #25:            640 acres   14.58% Interest   California   37%-47% Discount**

Sale property and buyer are the same as the previous transaction in (Comparison #24) above selling in April of 1987. With this purchase, the buyer's interest increased to 85.41%. A single individual held the remaining 14.58% interest which ultimately sold for \$31/acre, or implied price of \$213/acre for the whole. Using the buyer's estimated of value from \$340 to \$400/acre noted above -- the discounts varied from 37% to 47% which I reconciled at 42%.

**Comparison #26:            76.64 acres   33.3% Interest   California            22% Discount**

This is a 76.64-acre irrigated tract in Santa Barbara County where the buyer (Rice) was the tenant and purchased a 1/3<sup>rd</sup> undivided partial interest. Sale adjoined the buyer's farm headquarters and personal residence.

Seller (Thompson) indicated the interest had been offered to other family members, but they declined. Based on full interest sales in the area, the property should have sold for \$9,000/acre. The 1/3<sup>rd</sup> interest sold here for \$2,349/acre, or an implied value of \$7,054/acre ( $\$2,349 \div 0.333 = \$7,054/\text{acre}$ ) -- a 21.62% discount from fee values of \$9,000/acre -- say 22%.

**Comparison #27:            320 acres   49.7% Interest   Kansas                33% Discount**

An agricultural tract located in Clark County where Harold Kirk acquired two 1/6<sup>th</sup> interests and two 1/12<sup>th</sup> interests from different parties in January of 1992. Buyer had farmed the property for 45 years, owned adjoining land, and felt he paid a premium for the interests.

County appraiser's shows the land had a market value of \$280/acre. The 49.7% partial interest sold for \$93.75/acre, or an implied value of \$188.76/acre for the whole. The contrast between the market value at \$280/acre and sale at \$188.76/acre shows a discount of 32.59%. This sale was also discussed in the article by Mr. Humphrey, "Unsyndicated Partial Interest Discounting".

**Comparison #28:            1,883.3 acres   50% Interest   Texas                40% Discount**

Ross Howard, Jr. and the Estate of Viola Howard sold this undivided 50% interest for \$301/acre to Thomas E. Legwig, Mark Katzfey, and Width Nelson Katzfey. A ranch property is located near Oakville in Live Oak County and sold in May of 1993 consisting mainly of rangeland. 107 acres was inventoried as improved pasture and 50 acres cultivated. The tract is irregular in shape, divided by paved highway IH-37, and bound by the Nueces River. The property had no structural improvements of value; plus 12.5% (1/8<sup>th</sup>) of the minerals were conveyed (not a factor).

Ten (10) area sales supported a value near \$500/acre. Thus, the 50% partial interest sale shows a 40% discount.

**Comparison #29:**    1,603.60 acres    25.0% Interest    California    75% Discount  
                          158.94 acres    12.5% Interest    California  
**Total = 1,762.54 acres**

This property contained 537.75 acres of dry cropland and 1,224.79 acres native range located near Kettleman City in western Kings County. James Ford sold at \$13,500 or \$7.66/acre in May of 1993. Local sales show \$200/acre for dry cropland and \$100/acre for range based on 100% interest prices.

The partial interest was marketed for several years with the only offer from the eventual buyer (R.L. Hewitson), the holder of the majority interest. The buyer is a knowledgeable farmer and cattleman with extensive holdings in the area.

**Comparison #30:**    222.1 acres    31.3% Interest    Idaho    28.6% Discount

David Miller sold a 5/16<sup>th</sup> partial interest in 222.1 acres in Stanley Basin for \$156,250 or \$703.51/acre in December 1994 described as the W½NW¼, W½SW¼ lying west of Highway 75 in Section 28; and E½NE¼, SE¼SE¼, N½SE¼ of Section 29-T8N-R14E. The four buyers had an appraisal completed on the 100% fee -- encumbered by a scenic easement at \$700,000. A later appraisal by another competent area appraiser confirmed that as a reasonable value for the 100% fee - - and \$700,000 was the beginning point for negotiation.

Seller was a distant family member (cousin) that owned a 3/8<sup>th</sup> undivided interest in the same property prior to the sale above. He lived in Washington D.C. and made little use of the property. The other family members were willing to purchase but negotiated for a discount. Even though these parties are related, the buyers were adamant that this was an arms-length transaction. Both parties were well represented by experts, legal and other and the major part of the negotiation revolved around the amount of the discount.

Indicated value of the sale of this interest by comparison to the whole was \$62,500 x 8 = \$500,000. Therefore the indicated discount by comparison to the \$700,000 before value was 28.6%.

**Comparison #31:**    102 acres    59% Interest    Texas    53% Discount

Tom Flournoy purchased an undivided 59%<sup>+/-</sup> interest in 102 acres in the J. R. Crofton Survey, A-149 of Angelina County between 1976 and 1978. The interest was divided among numerous owners with various partial interests; and according to the buyer, approximately 20 deeds were required for the sale of these interests. The grantee confirmed the average cost was \$193/acre, based on the full undivided acreage (\$19,686 ÷ 102 acres = \$193/acre).

A review of sales in the area during that time-period indicated tracts of this size were selling for approximately \$700/acre. The proportional partial interest would have been \$413/acre (\$700/acre x 59%) compared to the actual purchase price of \$193/acre -- which indicates a 53% discount. The

discount at 53% is likely high because resulting from acquiring numerous 1%, 2%, and 5% undivided ownerships over a 2-year period.

**Comparison #32: 5,754.39 acres 50% Interest Texas 56.1% Discount**

James Kinney purchased an undivided 50% interest in 5,754.39 acres from Farm Credit Bank on June 6, 1994. The price was confirmed at \$31.28/acre or \$90,000 total. This was a ranch-type property that consisted mostly of desert shrubs located in an area characterized as arid with rolling to hilly terrain. Legal access was by easement and there were no buildings.

Farm Credit Bank acquired the tract in foreclosure and the eventual buyer owned an outstanding 50% interest. The seller financed the sale, but would not finance an undivided 50% in the whole 5700<sup>+</sup> acre tract; therefore by mutual agreement, the property was partitioned prior to sale. However, the price was established based upon the tract being an undivided interest. Farm Credit Bank had actively advertised and marketed the property for over 2 years prior to this sale.

Three months prior to this sale, Farm Credit Bank sold three tracts ranging in size 2,872.92 acres to 4,833.48 acres in the same general area for \$71.25/acre and are considered to be similar to the 5,754.39-acre partial interest property. The discount from \$71.25/acre by comparison to this partial interest sale at \$31.28/acre equates to a discount of 56.1%.

**Comparison #33: 296.353 acres 33.3% Interest Texas 50.6% Discount**

Billie Ruth Goforth Stone purchased an undivided 1/3<sup>rd</sup> interest in 296.353 acres located in the J. Pineda Survey, A-40 in Cherokee County from Allen Preston Goforth on 2/3/93. This tract is located northwest of Jacksonville and is mostly open pasture. The undivided 1/3<sup>rd</sup> interest was purchased for \$32,200 total, or \$325.96/acre based on the undivided acreage ( $\$32,200 \div 98.784 \text{ acres} = \$325.96/\text{acre}$ ).

An independent appraisal, dated just prior to this transaction, demonstrated the full fee simple interest had a value of \$660/acre. It should be noted that the purchaser already owned a 1/3<sup>rd</sup> interest in the property and the 1/3<sup>rd</sup> interest purchased was from a family member. However, according to all parties involved, this was an arms-length negotiated sale and the family relationship had no influence on the price. The discount from market at \$660/acre to the price paid at \$325.96/acre was 50.6%.

**Comparison #34: 245.51 acres 50% Interest Texas 64.5% Discount**

Charles Smith purchased an undivided 50% interest in a 245.51-acre tract of land located northeast of Gilmer with 30 feet of frontage on State Highway #155 from John Brawner on 1/13/97. The tract was inventoried as 30 acres pasture with the remainder having a good stand of mature, merchantable timber. The undivided interest was purchased for \$64,447.47 or \$525/acre ( $245.51 \text{ total acres} \times 50\% = 122.76 \text{ 'net' acres}$ ). It should be noted that the grantee in this transaction already owned the outstanding 50% interest; therefore, this transaction gave the buyer full ownership rights associated with the property.

Based on documented area sales data, this partial-interest property had a total timber stumpage value of \$1,241/acre. A timber contribution factor of 75% was typical of those sales, as of the date of this sale, which would yield a timber contribution of approximately \$931/acre, or \$200,640 (215.51 acres x \$931/acre). The typical land price for pasture was \$700/acre and wooded cut-over land was selling for approximately \$400/acre. Thus, a discount of 64.5% is computed.

Fee Value	:				
Cut-Over		215.51	x	\$ 700.00	= \$ 150,857
Pasture		30.00	x	\$ 400.00	= \$ 12,000
Merch Timber					= \$ 200,640
	Total =	<u>245.51</u>		\$ 1,480.58	= \$ 363,497
Fractional Interest	:			\$ 525.00	= 64.54%

The discount shown represents the 'sum of the parts' and would normally overstate the value of the whole interest at \$363,497. However, with merchantable timber playing a significant part in the analysis, a 'market adjustment' factor of 75% was applied to that timbered portion to minimize overstating the fee value at \$363,497 -- and more accurately reflect the discount.

**Comparison #35:          683.5 acres          25% Interest Texas          25.3% Discount**

Thomas Runge purchased an undivided 1/4<sup>th</sup> interest in a 683.5-acre property located on Mason and Llano County line known locally as the Marscall Ranch from Thomas Kyger on 1/6/97. The purchase price of the undivided 1/4<sup>th</sup> interest was \$127,260 total or \$747/acre for the 170.875 'net' acres. The ranch is a rolling native rangeland with a seasonal creek. There is a small concrete ranch house, wood-frame barn, and various livestock pens all of which have minimal contributory value. Access is via easement. It should be noted that the grantee was already a minority owner in the property and the acquisition of this 25% interest enhanced their ownership position.

In July 1997, a very similar 284.594-acre ranch property sold from William S. Kidd Corporation to James F. Kemp for \$1,000/acre. By comparison to the fractional interest sale above at \$747/acre, this shows a discount of 25.3%.

**Comparison #36:          857 acres          2.46% Interest Texas          25.3% Premium**

Daniel Van Deventer purchased a 2.46% undivided interest in an 857-acre parcel of land located north of Liberty off FM #1011 near the Knight's Forest Subdivision from Gary Van Deventer on 12/12/02. This is a hardwood bottomland parcel with frontage on the Trinity River. There were no significant building improvements. The undivided 2.46% interest sold for a total of \$10,562.50, or \$500/acre [21.08 net acres (857 acres x 2.46% = 21.08 net acres)].

Immediately after this purchase, the buyer (Chandler) purchased a 157.5-acre landlocked parcel for \$44,000 or \$279/acre. An examination of tracts in the area with access, similar to the 857-acre tract indicates a value for the 100% fee interest of \$400/acre. This purchase of a minor 2.46% undivided interest actually sold for a premium, instead of a discount. *The tract was purchased to provide access*

to an adjoining landlocked parcel. Since the purchase of the undivided interest, there has been considerable tension among the remaining partial interest owners over use for access to the rear or second property.

**Comparison #37:      582.72 acres      50% Interest   Montana      20% Discount**

This property contains a mixture of cropland and grazing, with some recreational appeal. The buyer (N. H. Browning, III) purchased the 50% interest from his nephew (Michael Browning) for \$96,000 in May 1996. Although it was a family transaction, the buyer tried to purchase the partial interest at a price below its proportional market value.

The property had been appraised at \$240,000. This would indicate a proportionate share of the 50% partial interest of \$120,000. The sale price of \$96,000 shows a discount of 20%.

**Comparison #38:      480 acres      80% Interest   Montana      10.6% Discount**

This May 2001 sale consisted of an 80% undivided interest in a 480-acre tract owned by an estate and three sisters. The property is located southwest of Willard (S2S2 of Section 1; and N2 of Section 12-T5N-R57E). A fourth sister did not want to sell the outstanding or remaining interest. Total sale was \$193,000, but included some additional lands (see below). The buyer (neighbor) adjoined this mixed dry crop/hayland and grazing tract.

Partial interest property offered for sale via written bids along with another 640-acre tract (100% interest) plus 453 AUMs of BLM permit. The contribution of this 640-acre parcel and BLM permit was \$111,870 leaving \$81,130 to the partial-interest portion.

Buyer stated he discounted the undivided interest; and since the original sale -- other 1/5th owner has been trying to split the property voluntarily. There was a small metal shed and old buildings of limited value. The fee value of the 80%-interest was \$90,768 based on \$165/acre for range, and \$300/acre for cropland. When contrasted with the purchase price at \$81,130 for the partial interest, this indicates a discount of 10.6%.

**Comparison #39:      234 acres      16.67% Interest   Montana      26.5% Discount**

Undivided 1/6<sup>th</sup> interest (16.67%) in a 234-acre dry crop tract located southwest of Great Falls sold on 6/12/92 described as the NESE of Section 32; and SW and N2SW of Section 33-T20N-R3E less a metes/bounds tract. This dry cropland parcel is accessed by county gravel road. Buyer (John Schrader) purchased the property from John Houghton for \$10,000.

The buyer (real estate appraiser) indicated market value at \$350/acre, or \$81,900 for the 'whole' and \$13,595 for the proportional share ( $\$81,900 \times 0.1667 = \$13,595$ ). By comparison to the partial interest sale at \$10,000, this shows a discount of 26.5%. In 1993 the buyer purchased a 66.67% undivided interest in the same property; thus, had a higher motivation to acquire this smaller portion, i.e., 26.5% discount likely understates the market's perception of its value.

**Comparison #40: 1,085.31 acres 51.01% Interest Montana 29.8% Discount**

Seller (Maxwell Trust) placed this tract on the market with a Realtor™ at \$165,000, which was slightly higher than one-half of a 1994 appraisal. Potential buyers were informed that minority interest holder might be disagreeable and difficult to work with. Son of minority interest owner was leasing property.

Buyer (Walter Gruel & Son) had adjoining land, needed pasture and wanted to straighten fence-lines. Property sold in May of 1997 for \$130,000. Buyer discounted price due to issues with minority holder along with concerns about possible litigation. Crop-share plus hay and pasture lease transferred to buyer which terminated in October 1997 (5 months).

Discount, based on listing price of \$165,000, was 21.2%; however, market was approximately \$363,000 via comparison to surrounding sales. Thus, the proportionate share of 51.01% was \$185,166 -- which shows a discount of 29.8% contrasted to the \$130,000 sale price.

**Comparison #41: 320 acres 50% Interest Montana 27.3% Discount**

Seller (Parker) and buyer (Sutton) both held at 50% undivided interest. Buyer had been leasing at a below market rate for several years. Property sold 5/20/96 for \$26,750. There was income to both parties since this was primarily cropland (gross income of \$2,408 with real estate taxes of \$160, maintenance and insurance of \$200, and management of \$193 for a net income of \$1,855).

Cropland in the area was selling in a range from \$225 to \$260/acre with the subject being best supported at \$230/acre. This would indicate an overall value of \$73,600 for the whole (320 acres x \$230/acre = \$73,600); and a proportional 50% interest at \$36,800. Compared to the sale price of the partial interest at \$26,750, the discount was 27.3%.

**Comparison #42: 2,321.97 acres 50% Interest Montana 0% Discount**

This 1983 grazing tract sale is located 45 miles east of Miles City. The purchase included a 50% undivided interest in 2,321.97 acres for \$92,800, or \$40.00/acre. Dividing by 50%, the implied value for the whole interest was \$80/acre.

Area sales within twenty miles that sold from 1982 to 1984 (four sales) demonstrate prices from \$75 to \$85/acre. This implies that there is no discount with the sale of the undivided 50% interest. The property had already been fenced separately with the buyer receiving a larger portion of use than the other owner. *Buyer stated he received a good deal because the larger portion received had fence and stronger forage production.*

**Comparison #43: 20,278.38 acres 8.334% Interest Montana 62.3% Discount**

This is an undivided 1/12<sup>th</sup> (8.334%) interest in a 20,278.38-acre ranch located 50 miles southwest of Miles City that sold for \$109,861.48 on 9/6/00. Hunt Oil Company owned an undivided 33.33% interest in the ranch prior to this sale. The majority owner is Hunt Industries, Limited with an undivided 50% ownership and Lydia Hunt Trust also holding an undivided 8.334% interest.

Hunt offered \$65.00/acre (\$109,861.48) based on 1,690.00 net acres (20,278.38 acres x 8.334%). Seller had been receiving a pro-rated lease payment negotiated in the 1960's. Grantor's income share would have been an estimated \$1,959.00 with lessee (Hunt Oil Co.) paying all costs. Hunt Oil Co. has been trying to accumulate ownership in the ranch. This ranch sold for \$3,500,000 in the fall of 2002, or \$172.60/acre. Compared to the selling price of the partial interest at \$65.00/acre, this represents a discount of 62.3%.

**Comparison #44:      163.00 acres      50% Interest   Colorado      42.1% Discount**

In 1996, Lynn and Ellen Ottoson purchased a one-half undivided interest in 163 acres in Weld County for \$151,900. The parcel was unimproved row-crop farm two miles southwest of Eaton. The transaction also included four shares of Larimer and Weld Irrigation Company that were sold for \$46,000, resulting in a net price of \$105,900 or \$1,299.39/acre for the partial interest conveyed.

The buyer incurred significant expenses and difficulties with other owners subsequent to the sale; and indicated he would not purchase a partial interest again. The tract was appraised by Mitchell, Axton, and McCarty in May 1996 for \$366,000 or \$2,245.40/acre for the full fee interest. Based on the appraised value, the indicated discount resulting from the partial interest sale was 42.1% (\$2,245.40/acre versus partial interest sale price at \$1,299.39/acre = 42.1 %.)

**Comparison #45:      66.983 acres      33.3% Interest   Colorado      52.9% Discount**

In December 1997, Evelyn Lippelman purchased a one-third (33.3%) undivided interest in 66.983 acres of land located in Gilpin County -- approximately two miles west of the community of Rollinsville -- for \$671.81/acre. The parcel is a vacant recreational property accessed from FS 105 via an unimproved four-wheel drive road. This property has moderate to steep terrain with an average elevation of 9,200 feet that varies from open to forested lands.

A nearby contemporary sale of 33.66 acres that also sold in 1997 sold at \$1,426.02/acre has been utilized in establishing the discount for the 33.3% partial interest sale. The 33-acre sale is very similar physically and has the same highest and best use that produced an indicated discount of 52.9%, i.e., \$1,426.02/acre value shown by the 33.66-acre sale versus the partial interest transaction at \$671.81/acre = 52.9% discount.

**Comparison #46:      20.56 acres      50% Interest   Colorado      47.6% Discount**

In 1997 in Park County, Colorado, Randolph Fischer purchased a one-half (50%) undivided interest in 20.56 acres of land for \$1,167/acre approximately three miles south of the community of Taryall in the Pike National Forest. The vacant recreational parcel was accessed via a gravel road. This property is open grassland with moderate terrain and average elevation of 8,580 feet.

A nearby contemporary sale of 10.33 acres (100% interest) that sold in 1997 for \$2,227/acre has been for direct comparison and establishing the discount for the 20.56 acre tract at 47.6%. The 10.33-acre sale adjoins the 20.56-acre partial interest tract and is very similar physically with the same highest and best use.

**Comparison #47: 120 acres 2-33.3% Interests Colorado 52.8% Discount**

Kenneth D. Wall purchased two one-third undivided interests in 120 acres in December 1997 from two different sellers in Park County situated approximately ten miles north of the community of Hartsel -- in the Elkhorn area. The parcel is a vacant recreational property accessed from County Road 5. The tract has moderate terrain consists of mainly open grassland with a small area of trees with an average elevation of 9,400 feet. There were no improvements of value with purchase prices of \$350/acre for each 33.3% interest which proportionately converts to \$1,051/acre.

A nearby sale containing 10.33 acres sold in late 1997 from Moses to Music for \$2,227/acre. It was similar physically -- except for size -- with the same highest and best use. By comparison to the partial interest sales above at \$1,051/acre, this comparison shows a discount of 52.8%, but the size difference of the 10.33-acre tract at \$2,227/acre likely overstates the discount.

**Comparison #48: 320 acres 50% Interest Colorado 34.7%-47% Discount**

In 1997 in Kit Carson County, the Joseph F. Berens Trust and Arleen B. Swartz purchased an undivided one-half interest (50%) in 320 acres of unimproved grassland from unrelated sellers for \$131.25/acre. The parcel is accessed via County Road EE and situated 0.5 mile east of Four Mile Road and ten miles north-northwest of Burlington. The north half of the property was not fenced at the time of purchase. Three (3) area sales of 100% interest each were used for comparison:

- A.) A 1999 sale from George to Fisher with 160 acres sold at \$225/acre -- the discount is 41.7%.
- B.) A 2000 sale from Stone to Mitchell containing 80 acres sold for \$247.50/acre. The discount shown by comparison at \$131.25/acre was 47.0%.
- C.) A 159-acre sale in 2000 that sold from Duvall to Bruian for \$201/acre. The discount is 34.7% using this comparison.

The indications likely overstate the discount due to the differing time-frames. The partial interest sale occurred 2-3 years prior to the other area sales since the market was moving upward during the interim.

**Comparison #49: 84.37 acres 76.67% Interest Texas 50% Discount**

In 1982, W.H. Johnston, Jr. purchased four undivided interests in 84.37 acres of land in Kimble County, Texas; the purchase price in each instance was \$2,000/acre. The four sales convey a total of 76.67% undivided interest and were purchased from four separate partial-interest owners.

- i. Seller - Willie Boyett Smith May 21, 1982 (Volume 100, Page 647)  
*Undivided Interest Conveyed - 20/90 or 22.22% or 18.75 net acres*
- ii. Seller - John D. Woodell June 7, 1982 (Volume 100, Page 726)  
*Undivided Interest Conveyed - 14/90 or 15.556% or 13.124 net acres*
- iii. Seller - Stuart Smith June 7, 1982 (Volume 100, Page 740)  
*Undivided Interest Conveyed - 21/90 or 23.33% or 19.69 net acres*

Three 1982-1983 sales were identified in Kimble County for comparison to the 84.37-acre partial interest transaction.

- A.) A transfer from Searcy to Porter containing 43.5 acres that sold for \$3,370/acre in 1982. The suggested discount is 40.65%.
- B.) A sale from Wall to Coleman in 1983 containing 24.23 acres and sold at \$4,300/acre. The indicated discount was 53.49%.
- C.) This tract sold from Williams to Johnston in 1982 containing 18.4 acres and sold for \$3,179/acre. Indicated discount was 37.09%.

The range of discount shown by the unadjusted data varies from 37.09% to 53.49%. Adjustment for items of dissimilarity would likely narrow the range and the results would indicate a discount in the upper half of the range by comparison to the larger 84.37-acre tract (size difference) -- say 50%.

**Comparison #50      600.95 acres      11.1% Interest Texas      40.0% Discount**

In 1983 in Kimble County, Texas, Alton D. Murr and W.E. Hooks, Jr. purchased an undivided interest from Laverne Smith Lockhart in 600.95 acres of land on August 11, 1983. The undivided interest conveyed was  $21/90^{\text{ths}}$  or 23.33% -- which converts to 140.22 net acres selling at \$350/acre.

The parcel is a rectangular shaped rural tract that varies approximately 300 feet in elevation from northwest to southeast. The ranch is typical range found in the west-central portion of the Edwards Plateau. An old dilapidated dwelling was not considered to contribute to value. Access to the property is via a private easement from County Road 270.

Two 1981 sales and one in 1983 were identified in Kimble County for comparison to the 600.95-acre partial interest transaction explained above.

- A.) Thompson sold 1,032.15 acres to Wishbone CC in 1981 for \$555/acre. The suggested discount was 36.9%.
- B.) Smart purchased 320 acres from Danforth in 1981 for \$643.75/acre. The discount was computed at 45.6%.
- C.) 642.59 acres sold from Pringle to Gideon in 1983 for \$550/acre. The discount was 36.4%.

The range of discount indicated by the unadjusted sales data varied from 36.4% to 45.6%. Adjustment for dissimilarities would likely narrow the range; and the results would indicate a discount above 40.0% for the partial interest conveyed.

**Comparison #51      1,172.5 acres      50% Interest Texas      51.7% Discount**

In 1996 in Frio County, Gladys Jennings purchased a one-half undivided interest (50%) in 1,172.5 acres of unimproved land from Southwest Bank of Fort Worth on October 3, 1996 for \$173.99/acre. The undivided interest acquired was 50%, or a net of 586.25 acres. The seller had listed the property for sale with local brokers and had actively marketed the interest for over four years with only one other offer of \$80,000 or \$136.45/acre.

This property had been appraised by the Noble & Associates appraisal firm for asset management purposes of Southwest Bank, in August 1996, at \$360/acre for the surface interest only. By comparison, this implies a discount of 51.7% for the one-half undivided interest that was conveyed.

**Comparison #52      3,389.44 acres      66.6% Interest Texas      37.4% Discount**

In 1997 in Brooks County, Charles N. Schwarz, Jr. purchased a two-thirds (66.67%) undivided interest in 3,389.4 acres from Rancho de los Jefes -- which converts to 2,259.74 net acres or \$435/acre. However, \$75.00/acre was attributed to improvements leaving \$360/acre for land only. This sale of a two-thirds undivided interest involved one partner buying out an existing partner. The partial interest was on the market and the eventual buyer matched the offering price.

- A.) The comparison sale is across the road from the partial interest parcel above and has identical physical features. Mann Family Trust sold 1,041.3 acres to Cruz and Best in 1997 for \$625/acre. The discount shown by this sale was 37.4% -- but its smaller size was superior (higher price per acre). Thus, it was adjusted downward \$50/acre to \$575/acre.

Comparing the adjusted price to the sale of the two-thirds undivided interest at \$360/acre demonstrates a 37.4% discount for the partial interest conveyed in the 3,389.44-acre tract.

**Comparison #53      966.8 acres      16.7% Interest Texas      69.8% Discount**

Garland Daniell purchased a 1/6<sup>th</sup> undivided interest in 966.8 acres (161.17 net acres) for \$60.82/acre in 1997. The property consists of three (3) non-contiguous tracts which are generally eight miles northeast of Tahoka in Lynn County.

- A.) A similar sale physically, located approximately six miles northeast, sold for \$934.58/acre but included \$85,990 in buildings (\$535.76/acre) -- which leaves \$398.82/acre for the land. This comparison shows a discount of 69.8% for the 16.7% partial interest.

NOTE: Local appraisers and Realtors™ agree that the sale of multiple tracts in one transaction generally results in a consideration for the *multiple tracts being 10%-15% less*. The discount indicated by the unadjusted sales data shows 69.8%, which is considered appropriate for the partial interests conveyed in the 966.8 acre farm tract.

**Comparison #54            2,500 acres    33.3% Interest   Texas                    22.8% Discount**

Nathan Sargent purchased a 1/3<sup>rd</sup> (33.3%) undivided interest in 2,500 acres located in Hutchinson County from William Curry in November of 1989 for \$278/acre. The 1/3<sup>rd</sup> interest in 2,500 acres converts to 833.33 net acres, with a gross sale price of \$231,667.

In early 1991, James F. Hayes, ARA was engaged to develop a market value appraisal for this property; the market value at that time was \$360/acre, indicating a discount of 22.8% for the partial interest conveyed in the property. *This discount reported is likely low since property values were appreciating during this time-frame, or between the purchase in 11/89 and appraisal in early 1991 -- some 16-18 months later.*

**Comparison #55            480 acres    16.7% Interest   Texas                    25% Discount**

In 1992, Edward Abraham purchased a 1/6<sup>th</sup> undivided interest (16.7%) in 480 acres or 80.02 net acres of land in Roberts County for \$18,000, or \$224.94/net acre. The property had been in the Conservation Reserve Program (CRP); however, at the time of sale, the CRP had expired. There were no structural improvements; but there was one repairable windmill.

A.) A sale of similar dry farmland in Carson County, which was in the CRP, was located ten miles southwest of the undivided interest sale. The sale was from Jackson and Phillips to Ritter in 1992, contained 320 acres and sold for \$300/acre. The discount was 25% compared to the sale price above at \$224.94/acre.

The indicated discount for the undivided interest is 25%; however, this percentage is distorted to degree since the CRP contract had expired on the subject -- yet was a part of the 100% interest sale.

**Comparison #56            3,840 acres    16.7% Interest   Texas                    30% Discount**

In 1993, Malouf Abraham purchased a 1/6<sup>th</sup> undivided interest (16.7%) in 3,840 acres of land, or 641.28 'net' acres or \$105/acre for the partial interest sale. This property is located in Gray County two miles south of Lefors. There were two windmills along with several stock ponds; a small house and various outbuildings that had no contributory value.

A.) A 100% interest sale of similar grassland located 20 miles north of Pampa and 15 miles northwest of Miami in Roberts County. It contained 4,308.3 acres and sold in 1993 from Curran to Schwartz for \$150/acre. This pairing shows a 30% discount for the partial interest.

**Comparison #57            1,120 acres    40% Interest   Texas                    40% Discount**

Marvin Shurbert purchased three undivided interests in 1,120 acres in 1981 in Crosby County. The purchase price in each instance was \$110.71 per acre. The three sales conveyed a total of a 40% undivided interest in the 1,120 acres and were purchased from three separate partial interest owners. There are no structural improvements of significance. The deeds were silent as to any mineral reservations.

- A.) Clara Shipman sold an undivided 1/5<sup>th</sup>, or 20% to Marvin Shurbert on March 23, 1981. This computes to 224 'net' acres acquired for \$110.71/acre.
- B.) John Zinn sold a 1/10<sup>th</sup> undivided interest (10%) on May 8, 1981 to Marvin Shurbert. This equates to 112 'net' acres purchased for \$110.71/acre.
- C.) Ella Beatty sold a similar 1/10<sup>th</sup> undivided interest on March 23, 1981 to Shurbert. This is also 112 'net' acres with a price of \$110.71/acre.

Two recent sales (100% interest) were identified in the same general area of Crosby County. One sale corners the 1,120- acre undivided interest sale above -- the second is eight miles further north.

- A.) A sale in 1979 from French to Roberts, Jackson and Collier containing 5,629.29 acres selling at \$140/acre. By comparison to the undivided interest sales above, this shows a discount of 20.9%. This rate is low because the 100% interest sale here contains 5,629.29 acres -- thus, a higher price would be anticipated for comparison purposes given the 1,120-acre size of the undivided interest sale above.
- B.) McNeill sold 1,261.23 acres to Jones in 1980 for \$260/acre. The discount is computed at 57.4%. This ranch is slightly superior which would overstate the discount.

The most likely discount was reconciled at 40%.

**Comparison #58            4,471 acres            50% Interest Texas            36.2% Discount**

In July 2000, Jerry Funk purchased a one-half undivided interest (50%) in 4,471 acres in Willacy County from J and L Properties for \$750/acre. There were no structural improvements of value with surface estate only conveyed. It is noted; the buyer owned the remaining interest prior to this purchase. Reportedly, unsuccessful attempts to partition the property had been made for several years. In the final analysis, the sale of the partial interest was negotiated at the indicated price. The buyer indicated that he felt like the market value of the property in fee was at \$1,200/acre, based on cropland at \$1,000/acre and rangeland at \$1,400/acre.

There are limited sales of large tracts in Willacy, Cameron, and Hidalgo Counties. Demand is above average, particularly for rangeland properties. Sales of large blocks of cropland are even less frequent. The sales found in the area were:

- A.) Cropland sale from Premier to Swanberg in 1997 containing 179.84 acres and sold for \$1,060.94/acre in Willacy County.
- B.) Cropland sale from Bingham to Malm in 1996 containing 208 acres in Willacy County. It sold for \$900/acre.
- C.) A rangeland property that sold from Woodward to Novillo in Willacy County in 1999. The price for the 480.951-acre tract was \$1,299/acre.

D.) Rangeland sale from Garcia to Four Owls in 2000 located in Hidalgo County. It contained 558.114 acres and sold for \$1,407/acre.

The average price of the cropland shown by the sales was \$980/acre, which is compatible with the buyer's assessment of the cropland value (at \$1,000 per acre). The indicated average price of the rangeland was \$1,353/acre -- which was also similar to the \$1,400/acre estimate by the buyer.

Based on the appraiser's analysis, \$1,000/acre was adopted for the cropland and \$1,350/acre for rangeland. The resulting indicated overall price totals \$5,258,509, or \$1,176.13/acre versus the partial interest price of \$750/acre -- which results in a discount of 36.2%. (Note, almost half of the property is cropland, which likely shows a lower discount than would normally be anticipated, i.e., cropland has a higher return and cash flow; thereby reducing the risk to a degree.)

**Comparison #59      364.84 acres    61.86% Interest Texas      46.5%-48.2% Discount**

In September 2001, Campbell A. Patton purchased a 61.86% undivided interest in 364.84 acres in Starr County 35 miles northwest of McAllen from Jack Scoggins for \$820/acre. There were no improvements and water was provided from one windmill. The hunting and recreational aspects were rated as above average.

The buyer stated he owned the other interests in the property and reduced the discount to acquire all of the remaining interests. The seller had considered partitioning, but reportedly elected to sell due to the difficult and time consuming process involved.

Two sales were identified which are similar to the partial interest sale above. Both 100%-interest sales were just across the line in Hidalgo County, but within the competing market area.

A.) A transfer from Cozad to La Radio Cristiana in 2000 containing 600 acres that sold for \$1,532/acre. The discount shown is 46.5%.

B.) A sale from Walker to La Mestena in 2001 containing 401.49 acres which sold at \$1,700/acre. The discount computed 51.8%.

**Comparison #60      1,694.28 acres    33.3% Interest Texas      45.5% Discount**

Willard L. Arnold, Judith A. Arnold, Jerry V. Allen and Vicky K. Allen purchased a 1/3<sup>rd</sup> undivided interest (33.3%) in 1,692.92 acres in October 2003 located in Mason County, or a 'net' of 564.7 acres for \$900/acre. The improvements had no contributory value. The hunting and recreational aspects were above average. *The remaining undivided interests were owned by the buyer.*

On May 11, 2004, Willard L. Arnold, Judith A. Arnold, Jerry V. Allen and Vicky K. Allen sold 100% interest in the 1,694.278-acre property to Thomas G. Loeffler, i.e., a resale for \$1,650/acre. The indicated discount for the 1/3<sup>rd</sup> undivided interest above, by comparison to this sale was 45.5%. This is strong market evidence or support a discount rate since it involves the same physical property.

**Comparison #61                  615 acres                  20% Interest   Texas                  37.5% Discount**

Diane Causey purchased an undivided 1/5<sup>th</sup> (20%) interest in 1997 in 615 acres, or a 'net' of 123 acres in Bandera and Uvalde Counties from Janet Fisher-Bost for \$406.50/acre. There were no improvements of value. It is noted that Ms. Fisher-Bost sold the undivided interest that she inherited from her husband, to her four former sisters-in-law. The Farm Credit bank financed the tract; however, a lien was taken encumbering fee simple interest in the 615-acre parent tract because the bank will not lend money on an undivided interest unless all co-tenants subordinate to the lien. The bank appraised fee simple interest in the 615 acres at \$625/acre.

- A.) A nearby sale of 600.0 acres was utilized for evaluation from Hume to Drane in 1996 for \$672.50/acre. The discount is shown at 39.6% by comparison to the partial interest sale above at \$406.50/acre.

The appraised value by FCB of \$625/acre indicates a discount of 34.9%. The sale, which is very similar physically to the 615-acre tract, shows a discount of 39.6% -- say 37.5% considering both.

**Comparison #62                  184 acres                  66.7% Interest   Texas                  51.2% Discount**

Martha Ann Turner purchased a 2/3<sup>rd</sup> undivided interest (66.7%) in 184 acres from Cromer in 1996 for \$425/acre to the 'net' acreage of 122.667. This property is located in Lynn County approximately one mile east of Petty's Gin. The property, an irrigated South Plains farm, had a center-pivot covering 120 acres, a farmstead, and the remainder in dryland cropland. The residence contributed some \$23,000, leaving a land value of \$300/acre. Minerals reserved in this, and prior transactions, were 130/184<sup>ths</sup> or approximately 71%.

Two sales of irrigated farmland located in the same general area were identified and have been used for comparison to the undivided interest sale above at \$300/acre (land only).

- A.) Sealy to White in 1997 containing 156.66 acres that sold at \$699.96/acre. The discount is computed at 57.1%.
- B.) Speckman to Asken in 1997 containing to 160.5 acres and sold at \$548.27/acre. The discount shown by this comparison was 45.3%.

The discount indicated by the unadjusted prices varies from 45.3% to 57.1%. The average is 51.2% which is considered reasonable for the partial interests conveyed in the 184-acre farm.

**Comparison #63                  12.12 acres                  50% Interest   Missouri                  33% Discount**

Bower, Humphrey, and Hintz, sold 12.12 acres to Robert Lyons in July of 1987 in Platte County. Improvements included an older two-story house in poor repair, a storm/root cellar, and livestock shed. The property had previously sold for \$40,000 and financed by the sellers; however, the buyers separated and defaulted on the note with a balance of about \$22,500. Humphrey offered to sell his 50% interest in the note for \$10,000 to the other party, brokers, an attorney, and other investors. The property was appraised for \$35,000; but, no one bought his interest.

A foreclosure action was completed with a cost near \$1,800. The property was marketed and sold within sixty days for \$30,000 cash. Humphrey's costs were \$1,750 in closing costs, and \$900 in foreclosure costs. His offer to sell his half interest in the note constituted a 33% discount.

**Comparison #64                      200 acres                      25% Interest   Kansas                      16.7% Discount**

Carl and Marjorie McAllister sold a 25% interest in 200 acres to Kirk in January 1986 for \$12,500 -- or a value of \$250/acre computed on 50 'net' acres. The Kirk brothers were farmers, investors, and auctioneers who owned adjoining land and farmed the subject prior to purchase. *They previously acquired a half interest because it adjoined and had live water that benefited adjoining pastures.* He estimated the value of the parcel as a whole at \$300/acre. They have subsequently failed to acquire the remaining ¼ interest, paying cash rent of \$400/year. The remaining owner refuses to sell claiming "sentimental value". The indicated discount for this partial interest is 16.7%, based on the buyer's analysis. This discount appears low given the prior ownership in the property.

**Comparison #65                      320 acres                      50% Interest   Kansas                      33% Discount**

Harold Kirk acquired four partial interest ownerships in 320 acres of land in Clark County in January of 1992 for \$30,000. The purchases are summarized as follows:

Seller	Acres	Ownership		Net Acreage	Sale Price	\$/Acre	Value of 100% Fee	% Discount
		Acres	%					
Habertier, Irene	320.00	16.67%		53.344	\$ 10,000	\$ 187.46	\$ 280.00	33.05%
Petersen, Tom	320.00	8.33%		26.656	\$ 5,000	\$ 187.58	\$ 280.00	33.01%
Davis, George	320.00	8.33%		26.656	\$ 5,000	\$ 187.58	\$ 280.00	33.01%
Eastman, Lyle	320.00	16.67%		53.344	\$ 10,000	\$ 187.46	\$ 280.00	33.05%
		50.00%			\$ 30,000			

*The buyer had farmed this tract for over 45 years plus owned adjoining land.* The buyer admitted paying too much for the partial interests because he owned the remaining outstanding partial interest in the tract. A local appraiser estimated a value of \$280/acre at that time based on productivity. Overall, this comparison shows a 33% discount for the interests acquired. However, this is rated a low discount given the buyer's previous involvement with the property and adjoining ownership.

**Comparison #66                      160 acres                      12.5% Interest   Kansas                      94.45% Discount**

The Estate of Ralph Benton McConnell sold a 1/8<sup>th</sup> interest (12.5%) to Geraldine King in October of 1993 for \$5,332.50, or \$33.33/acre. The tract is located in NE of Section 17-T29S-R39W in Stanton County. *The interest was acquired by a sister from out-of-state that did not own any other interests in adjacent property.* The County Assessor confirmed this was an arms-length sale and indicated the 100% ownership was \$96,000, or \$600/acre.

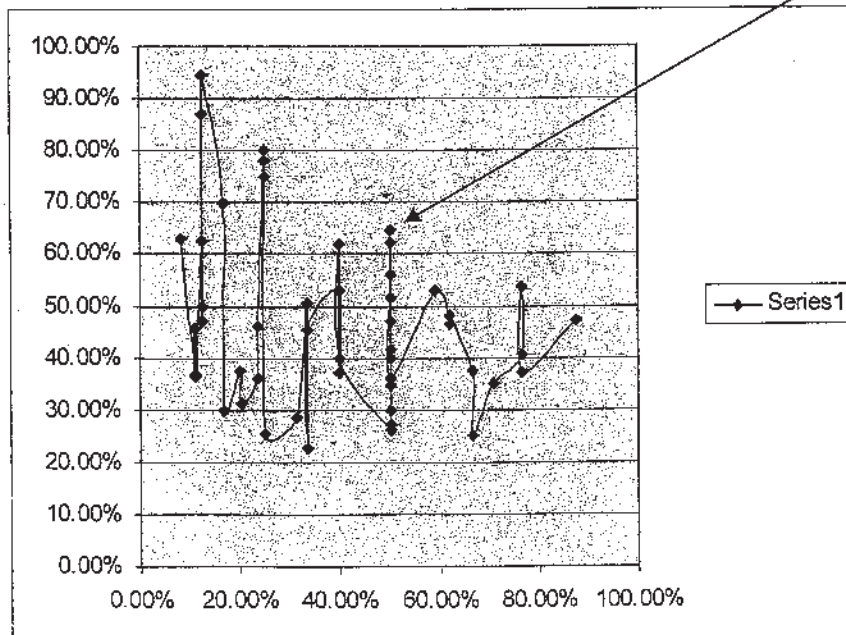
This sale shows a 94.45% discount from the market at \$600/acre versus the \$33.33/acre price paid for the 1/8<sup>th</sup> interest.

## Conclusions:

In review, the market discounts have remained relatively constant through time and older indications appear to be just as valid today. The sales documented are also supported by sales transactions and conclusions presented in various technical journals noted earlier in Section 4 of this report.

The statements below reflect my observations on discounts associated by property type, i.e., range, cropland, properties with recreational overtones, and those capable of generating 'non-ag' cash flows.

1. Discounts are apparent on most legitimate arms-length, or third party transactions -- no matter what the acreage size or percentage of ownership.
2. There appears to be lower discounts on cropland tracts or those properties with outside income -- say from hunting or other recreational amenities by comparison to pure grazing or rangeland types.
3. I have graphed the grazing or rangeland sales -- since cropland and other types have a tendency to distort the overall impact. While points on the graph (vertical rows) relate to typical ownership percentages, there is a general downward trend to the right -- where the ownership is the highest. Simply, there is lesser discount for ownerships greater than 50% -- than those observed on the left side of the graph where the ownership is less than 50%. Note there are twelve 50% ownership sales (center of graph) with discounts from 25% to 65%!



4. Depending on state laws, properties with two or three owners tend to be partitioned or involve interest owners in the same property acquiring minority or outstanding positions.
5. There are more minority interests selling than majority positions. The reason seems to be obvious, i.e., it is more logical to find situations where the majority interest holder acquires minority interests.
6. The smallest known partial interests that sold in the private sector were 7.14% with a 49% discount, and 8.33% with a 63% discount -- with mixed recreational and/or cropland influences. Obviously, there is no mathematical relationship to the size of discount; however, there is a strong indication that at some point the market simply ceases to exist for small ownerships -- say less than 5%-8%.
7. The highest discount was 94.45% on a 160-acre parcel in Kansas with 12.5% ownership; and 93% discount on a 25% interest in Nebraska and Illinois (same family in both locations).
8. One premium of 25.3% was paid on a 2.46% ownership where the purchase was used for access to an adjoining rear parcel which had no legal access. The remaining majority owners remain upset over the exclusive use by one very minority interest holder for that purpose -- a legal action ensued.
9. A few partial interest sales documented were to family members or other interest holders within the same property that were included if they were validated by the market or there was competition outside the property ownership structure.