

STEWARDSHIP INCENTIVES PLAN

For:

HOGBACK RIDGE

Databank Corporation

~~Harry Bieber~~

Box 030458

Fort Lauderdale, FL 33303

(305) 771-6373

N1/2 NW1/4 SW1/4, Sec 8, T3N, R70W, S.P.M.

20.1 Acres

Prepared By:

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This management plan has been prepared at my request to guide my Stewardship management activities which I voluntarily apply on my property. I believe that activities recommended in this plan are appropriate to meet my objectives and will benefit the natural resources on my property. I intend to apply the recommended practices and to maintain them for a period of at least ten years, thus helping me to be a good steward of the forest and associated resources entrusted to me on my property.

H. P. Bieber

Harry Bieber, PRESIDENT
Databank Corporation

20 Dec 93

Date

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OBJECTIVES: The forestry objectives for this property are:

1. Consistent with requirements of the Stewardship Incentives Program, to improve the health and vigor of the forest and enhance its productivity.
2. Follow silvicultural principles and multiple use management, giving particular attention to production of forest products and enhancement of wildlife habitat.
3. Preserve aesthetic qualities.
4. Protect soil and water resources.

AREA: The property contains 20.1 acres, 7.1 acres of which are forested. Of the 7.1 acres, 1.0 acres will be occupied, eventually, by a house. There is a 0.8-acre opening on the west edge of the property and the eastern 12.2 acres are occupied by grass.

PROPERTY LOCATION: Hogback Ridge is located between Stone Canyon and Beech Hill, on the east side of the road, about 2.0 miles northwest of Stone Canyon Road.

BOUNDARY MONUMENTS: The northwest corner is a General Land Office quarter corner between Sections 7 and 8. The northeast corner is the east sixteenth in the east-west quarter-section line of Section 8. The southeast and southwest corners are General Land Office sixty-fourth corners. All four corners are marked with aluminum caps on iron rebars.

ACCESS: Access is by way of a dirt road from Stone Canyon Road.

TOPOGRAPHY: The property is on top of the Noland Hogback, on the east side. Elevation ranges from about 5880 feet above sea level in the northeast corner to about 6320 feet above sea level in the northwest corner. Aspects are east. Slopes on top of the ridge average about 15%; on the east side, slopes average about 50%.

GEOLOGY: Most of Boulder County's geologic history had already happened by the time this property's bedrock (Ralston Creek Formation?) was laid down. About 1.4 billion years ago the Silver Plume Quartz Monzonite Formation intruded earlier formations to form the core of what later became today's Front Range.

Lower Paleozoic rocks (Cambrian through Mississippian) are missing in this area. It is thought that these rocks once existed, but were eroded away during Early Pennsylvanian times when the Boulder area was uplifted on the northeast flank of the Ancestral Front Range uplift, one of several northwest-trending mountain ranges that comprised the late Paleozoic Ancestral Rocky Mountains. These mountains (Ouachita Orogeny) resulted from the reactivation of Precambrian structures when Africa collided with South America and the southern edge of North America.

By the late Paleozoic period the Ancestral Front Range was eroded to a set of low hills. Gravel and sediments washing off these hills were deposited as the Ralston Creek Formation during the early Jurassic and were later uplifted to become bedrock on this property.

In the early Cretaceous period the area began to subside and was eventually buried under almost 10,000 feet of marine sediment.

In the late Cretaceous-early Tertiary period (about 67.5 million years ago), the Laramide Orogeny uplifted a mountain range with much the same configuration as the present day Front Range. Erosion about balanced uplift so that the relief was never great, much less than at present. By the late Eocene the uplift ceased, leaving a low-profile range of hills. Most of the faulting and eastward tilting that raised the Noland Hogback into position occurred during the Laramide Orogeny.

Intrusive volcanic activity occurred to the southwest during the Paleocene, but apparently did not involve this property.

During the Oligocene this region was reduced to a plain, similar to eastern Colorado today with an elevation of about 3000 feet. In the Miocene, thermal uplift and east-west expansion formed the Rio Grande Rift and began the rise of the modern Front Range, which continues to rise today.

Though this property was never glaciated (The nearest glaciers almost reached Peaceful Valley and Allenspark.), during past glacial episodes its ecotype probably fluctuated between ponderosa pine and spruce/fir forest, as the climate changed. During inter-glacials, the ecotype was probably ponderosa pine/Douglas-fir, much like it is today.

SOILS: Soil maps for the western part of Boulder County have not been published; Soil Conservation Service agronomists are in the process of doing this at this time.

Piñata very stony loamy fine sand is a moderately-deep, well-drained soil that occurs in stoney sandy residuum weathered from sandstone on upland ridges and side slopes. The available water capacity is moderate with slow permeability. Annual precipitation is 14 to 18 inches per year. Runoff is medium to rapid. Effective rooting depth is 20 to 40 inches. Erosion hazard is high. Land capability class is VIIe-1, non-irrigated; tree suitability group is 6. This is the only soil type on the property.

Capability Unit VIIe-1, non-irrigated can be used for silviculture and grazing. Grazing should be limited to removal of no more than half the current year's grass growth. Suitable grasses are Arizona fescue, mountain muhly and pine dropseed. Seeding is difficult, except in local areas.

HISTORICAL LAND USE: This area has been used for grazing since the 1870s. It was logged about 1880 and has burned several times since settlement of the area in the 1850s and 1860s. Heavy grazing has never been a major use of this property because the lack of surface water.

DESIRED CONDITION: Healthy, vigorous, fully-stocked stands of trees are required by the Stewardship Incentives Program. This condition need not be achieved immediately, but progress must be made in this direction (Because you are not receiving cost-sharing money for the plan, nothing is required, except maintaining practices for which you actually receive cost-share money.).

IMPACT ON NEIGHBORS & NEARBY COMMUNITIES: The Defensible Space practice may not even be noticed by your neighbors, who will believe it to be nothing more than landscaping around the house. Reforestation is usually not noticed; seedlings are hard to see when first planted and grow gradually, so that neighbors become used to their presence without realizing it. The "windbreak" across the front will also be regarded as beautification and people may not realize it is a conservation practice.

No cutting is needed, though some clean-up of dead and down wood would reduce fire hazard. Firewood sales, if any, will have no effect on local markets.

LOCAL MARKETS: There is no commercial sawtimber on the property. A single small-scale cutter can handle everything that is needed; you may wish to do your own cutting so as to use the wood yourself.

WILDLIFE: Deer are common on the property. The area is frequented by a mountain lion in late winter, and the usual assortment of rabbits, squirrels, chipmunks, ground-squirrels and other birds and small animals make use of it.

Threatened or Endangered Species: The property is located in Block B11 (Fort Collins). Protected species in this block are:

1. the American peregrine falcon
2. the bald eagle
3. the interior least tern and
4. the greenback cutthroat trout.

For the most part, these species do not make use of the area. The tern is a shore bird and prefers large lakes and you own no trout streams.

Eagles visit Boulder in winter, staying in the piedmont area with its milder weather and migrating north when weather improves. Boulder is on the extreme southern end of the eagle's summer (nesting) range. Occasionally a pair will nest in the area, but it is very unusual.

The property is within the foraging area of a known peregrine falcon nest, but there are no nesting sites on the property.

Wildlife Habitat Opportunities: There are a number of practices that could be implemented to enhance the property's usefulness to various species of wildlife. Several ideas are:

1. Create woodpecker and cavity-nesting bird habitat by killing selected trees and letting them stand. As trees die, they are attacked by woodborers and other insects which provide a food source for woodpeckers. As the trees decay, woodpeckers build nests in them, providing housing for themselves and other cavity-nesting birds, such as flycatchers (Woodpeckers are perfectionists; it takes them five or six tries before they get the hole just right; the extra holes are available for other animals to use.). Snags at least 10.0 inches in diameter are needed at a rate of 2.3 per acre.
2. The meadows can be used by western blue birds if there is adequate nesting cover nearby. Thinning work in ponderosa stands will eliminate nesting trees, unless special efforts are made to preserve useable trees. These are snags located

at 100-yard intervals around the perimeter of the meadows. They are created by girdling selected trees: these trees must be at least ten inches in diameter; trunks must be sheltered by foliage from other trees and there can be no tall grass or forbs around the stump.

It takes several years for a girdled tree to die and decay enough that woodpeckers will build nesting sites in it. In the mean-time nesting boxes should be put up. These should meet the same requirements for spacing and location as nesting trees.

3. A shrub thicket consisting of 250 Woods roses, golden currants or caraganas could be planted in a tenth-acre block to provide food and cover.

In order to meet Stewardship requirements, at least one wildlife practice must be implemented. There are scores of such practices; the above are intended only as suggestions. The practice is cost-shareable.

INVENTORY: The entire property is in the ponderosa pine/Douglas-fir/Arizona fescue ecotype. The mix of species in different parts of the stand represents various seral stages within this type.

The stand consists of 7.1 acres of ponderosa pine. There are a few sawlog-sized trees, but most are pole-sized. The area has light-to-medium stocking (1200 board feet per acre). The pole class contains about 5 cords and 50 square feet of basal area per acre. Both classes are about the same age (80 years).

SILVICULTURAL OBJECTIVES: The objective is to utilize as many of the property's resources as possible, thereby maximizing yield. This will be accomplished using four practices:

1. A Defensible Space practice around the house will help protect it from fire by:
 - (A) thinning trees near the house so crowns do not touch; this will keep fire from spreading to the building through the tree-tops.
 - (B) pruning trees in the thinned area so fire cannot climb from the ground into the tree-tops.
 - (C) removing accumulations of debris so that radiant heat from burning debris cannot ignite the building.

Defensible Space mainly serves to provide emergency access around the building so a fire crew can defend it without endangering themselves or their equipment. The practice is eligible for up to \$750 in cost-sharing money.

Money spent on Defensible Space activities can be added to the basis of the property and given capital gains treatment when the property is sold. Under current long-term capital gains, the savings will amount to an additional 28% of out-of-pocket cost.

2. A windbreak along the west property line will provide a visual barrier between house and road and also reduce wind in the yard. A three-row windbreak consisting of a row of American plum, a row of Rocky Mountain juniper and a row of ponderosa pines, will require 150 plums (4-foot spacing), 120 Rocky Mountain junipers (6-foot spacing) and 90 ponderosa pines (8-foot spacing). Rows should be eight feet apart with short species (plums) on the upwind (west) side and tall species (pines) on the lee (east) side. The planting will occupy 0.5 acres and be eligible for up to \$500 in Stewardship Incentives cost-sharing.

Seedlings cost \$256.98 (including sales tax). Weed barrier will cost \$682.06 and staples will cost \$78.23. Labor is \$600.00 for planting and \$495.00 for laying weed barrier. You can save some money by doing the work yourself. Your own labor can be cost-shared.

Windbreak plantings are also eligible for capital gains treatment. Of the estimated \$2112.27 total cost, Stewardship could reimburse \$500.00 and you could get back another \$591.44 through capital gains, leaving a net cost of \$1020.83.

3. Tree planting. Most of the property is non-stocked. It is eligible for up to \$410 per acre in reforestation funding. An acre requires about 400 seedlings (\$383.16) and 2400 linear feet of 6-foot-width, 6-mil. black plastic (\$341.96). It also requires 6800 staples (\$303.97). Labor runs about \$1200-\$1600 per acre for planting the seedling and laying the plastic. Again, you can save money by doing the work yourself. There are some economies of scale that could reduce the per-acre cost, if you decided to plant a large area.

Reforestation costs are eligible for special income tax treatment: Out-of-pocket costs can be amortized over a seven-year period and deducted from income (seven-year amortization, six-month convention, straight-line

depreciation); they are also one of the few things still eligible for the 10% investment credit. Assuming planting costs of \$2429.09 per acre, you could deduct \$242.91 for investment credit and \$173.51 in reforestation credit in the first year. \$347.01 in reforestation expenses could be deducted each year for the next six years, and \$173.51 could be deducted in the last year. If you are in the 28% tax bracket, and use cost-sharing, the Federal government would eventually pay \$1158 out of the \$2429 (or 47.7% of the total cost). Because Colorado's income tax is based on the Federal return, the state even chips in a few dollars (about \$25).

Participants in Stewardship are required to carry out a silvicultural practice, such as thinning or reforestation. This could be just a token, such as a 0.1-acre planting, funded as a wildlife thicket (\$280, cost-sharing), or might be something larger.

4. Wildlife habitat improvement. Besides the practices listed above, there is a rather large book of suggestions, ultimately, listing hundreds of possible wildlife habitat needs. One practice is required for participation in the Stewardship Incentives Program. The most popular practice seems to be a tenth-acre shrub thicket.

STEWARDSHIP "REQUIREMENTS":

First, if you don't accept the government's money, you are under no obligation whatsoever. You can carry out any combination or none of the above practices, the Colorado State Forest Service will help you do it, and there will be no commitment beyond cost of materials and CSFS service charges.

If you do accept cost-sharing money, the only practical "requirement" is the one to "maintain the practice" for ten years. This means if something should destroy the practice, you must replace it or refund the money, plus interest (18%), plus a 25% "liquidated damages" fee. Even the replacement may be eligible for cost-sharing if it wasn't your fault (like a fire started by an unknown person). If you sell the property, you must convince the new owner to assume these responsibilities, or reimburse the cost-share money, as above. If you amortized reforestation costs and sell the property before ten years have passed, the deduction is subject to recapture; see your tax preparer for details.

Other requirements are handled by the administrative forester or funding committee simply by with-holding practice approval and/or funding. You need not worry about these rules, except to know that if you break one, your funding request will be denied before

you can get into trouble. To avoid that problem, simply complete practices in the order listed below. Whether they are completed in the year shown, is not important; only the order is important. This plan will be accepted as a basis for cost-sharing requests through September 30, 2004, so there is no rush.

IMPLEMENTATION SCHEDULE:

1994: Silvicultural practice: This should be a reforestation practice, as there is no need for thinning work in this stand. A tenth-acre planting will suffice. Costs are covered above. It could be located in the southwest corner of the property as an adjunct to the windbreak and/or wildlife thicket, or could be located down the hill toward the eastern end of the property. If you wish to cost-share this practice, you need to sign up as soon as possible: I expect that applications will not be accepted after January 15th. The cost-sharing program can reimburse \$41.00 for this practice (Don't forget the two tax write-offs.).

1995: Wildlife practice: This could be any practice listed above. I am assuming that a tenth-acre shrub thicket will be the practice chosen. Costs are covered above. The cost-sharing program can reimburse \$280.00 for this practice.

From this point on, the order of implementation does not matter; the minimum requirements for a silvicultural practice and a wildlife practice have been met.

1996: Defensible Space: Thin trees around house, prune fire ladders and clean up slash and debris. The cost-sharing program can reimburse 65% of actual cost, up to \$750.00. This includes your own labor and the cost of chipping or disposing of slash.

1997: Windbreak along the road: This is a three-row windbreak that bends at the southwest corner of the property line. Costs are covered above. The cost-sharing program can reimburse \$500.00 for this practice.

1998: Additional reforestation planting: The initial reforestation planting uses a planting density of 680 seedlings per acre. This is to allow for substantial losses, in case the failed seedlings are not replaced. For reforestation of a large area, costs will be less if a lighter planting density of 390 seedlings per acre is used and failed seedlings are replaced for each of the second and third seasons after planting. Current costs per acre are:

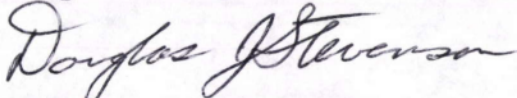
390 large-pot ponderosa pine seedlings (\$365.55), 2340 liner feet of 6-foot, 6-mil. black plastic (\$333.41) and 6630 6-inch wire staples (\$296.37), (Total: \$995.33). Labor will come to about \$1500.00. The cost-sharing program can reimburse up to \$410.00 per acre for this practice.

- 1999: Additional wildlife practices: There is a wide selection of possible practices. Costs vary considerably with the practice. The cost-sharing program can reimburse 65% of actual cost, up to a limit that varies with the practice.
- 1995 - 2004: Maintain practices already installed. Most planting practices require very little attention after the third season. Black plastic deteriorates after two-to-three years; you may wish to replace it. Growth effects from the plastic remain for several years after it has completely disintegrated. Replacement is not always necessary.
- 2004: Update this plan. This is completely optional, but is often done by people interested in the long-term health and maintenance of their forested property.

For many years to come, you can enjoy your property and at the same time, obtain a modest return on it. With people like you taking care of our forests, their well-being is assured.

Thank you.

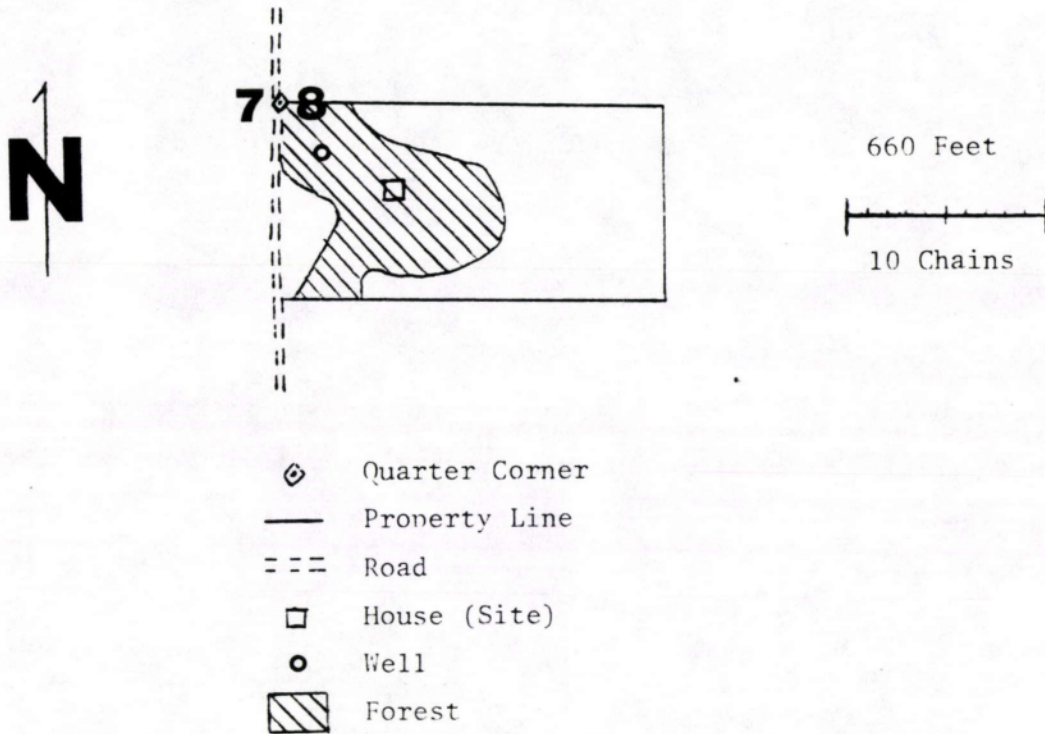
Respectfully submitted by,



Douglas J. Stevenson
Asst. District Forester

HARRY BIEBER

N1/2 NW1/4 SW1/4, Sec 8, T3N, R70W, S.P.M.



Drawn By:

Douglas Stevenson

November 24, 1993