

# KEYSTONE RANCHES, INC.

*Ismay, Montana*



**Submitted by the Montana Stockgrowers Association**

**F**or the past half century, Bill and Joyce Almy have worked to improve the natural sustainability—and profitability—of the 22,000 acres of Keystone Ranches, Inc. They have done it by learning to balance change—always a constant in the highly variable eastern Montana environment. Through innovative water and grazing management, supported by cooperation with various agencies, they have raised the carrying capacity of the land by almost 50 percent, cut their debt-to-asset ratio from 55 percent to under 15 percent, improved wildlife habitat, maintained long-term relationships with employees, and supported their eastern Montana community.



## KEYSTONE RANCHES, INC. – ISMAY, MT



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*Joyce and Bill Almy*



*Keystone Ranches, Inc. is located near the town of Ismay, Mont.—population 26—in eastern Montana. Ismay is 60 miles east of Miles City, Mont., 45 miles west of the North Dakota border and 60 miles northwest of the South Dakota border.*

### SECTION I - THE LAND, ECOLOGICAL CONTEXT & HISTORY OF THE BUSINESS

Keystone Ranches, Inc. has been owned and operated by Bill and Joyce Almy since 1960. The ranch consists of more than 10,000 acres of deeded land, 10,000 acres of federal land and 1,280 acres of state land near the tiny town of Ismay in eastern Montana. The Almys raise cow/calf pairs and yearlings.

“Making the best sustainable and economic use of the 22,000 acres has been our goal,” Bill Almy said. “Change is one constant in our lives. Modifying our current modus operandi is an ongoing process, dictated by weather patterns, employee skills, livestock prices and, above all, a need to maintain profitability.”

From the beginning, the Almys have worked to improve the ranch by focusing on natural and economic productivity through careful stewardship.

#### *The Land & Ecological Context*

Montana is a large state with considerable variations in temperature, topography, soil type and precipitation. Largely settled from west to east after gold was discovered in the 1860s, the central and eastern areas saw the evolution

of livestock operations, often based on cattle driven north from Texas. Not until 1910 was much interest shown for homesteading and farming east of the 108th meridian. “Great Plains” country is subject to drought one year out of five and arctic blizzards at about the same interval.

Snow on the mountains west of 108° melts gradually—even into August, which supplies springs, creeks and rivers year ’round. Not so in eastern Montana where the Almy family resides and operates Keystone Ranches, Inc. Snow pack normally melts in seven to 10 days, filling reservoirs and flooding contour-diked hay meadows. Smaller creeks go dry by mid-June. Miles City, 60 miles west of Ismay, averages 13.31 inches of precipitation. Mildred, 13 miles north of Keystone Ranches, Inc., averages 12.69 inches.

The soils on Keystone Ranches, Inc. were laid down during the Tertiary Period and are further defined as being part of the Fort Union Formation. Large log-type sandstone rock formations called “concretions” occur in all the pastures—quite scenic and very typical of the



Fort Union formation. The soils are fairly light and porous, high in pH at 8.5, and 4s and 5s on the capability classification scale.

### *History of Keystone Ranches*

Prior to beginning Keystone Ranches, Inc., Bill and Joyce spent seven years as hired managers on a cattle and sheep ranch in the extreme southeastern corner of Montana. It was remote—no telephone or graded road, 14 miles from a school and 24 miles from the services of the nearest town. They wanted to try their wings and better provide for their three children, so they moved to the little village of Ismay where it was only a quarter mile to the nearest school, only six miles of graded, graveled road to an oiled highway, and there were seven flowing artesian wells, a private telephone line, and public utilities providing natural gas and electricity.

Suffering a shortage of capital, they formed a partnership in 1960 with a former employer of Bill's and bought out a family wishing to retire. (The partner suffered a heart attack just one year later and sold out to the Almys.) The original owners had industriously compiled more than 30 homesteads with federal and state land in the 1930s and '40s. The ranch was fenced around the perimeter with some cross fencing. The owners had built a clever meadow-diking system for hay production. A small dam was bulldozed in Pennell Creek to direct spring runoff to flood the dikes. Unfortunately, the grazing pastures were large and poorly watered. O'Fallon Creek and Pennell Creek cut across the corners of the two largest pastures. Riparian area damage resulted from poor livestock

distribution.

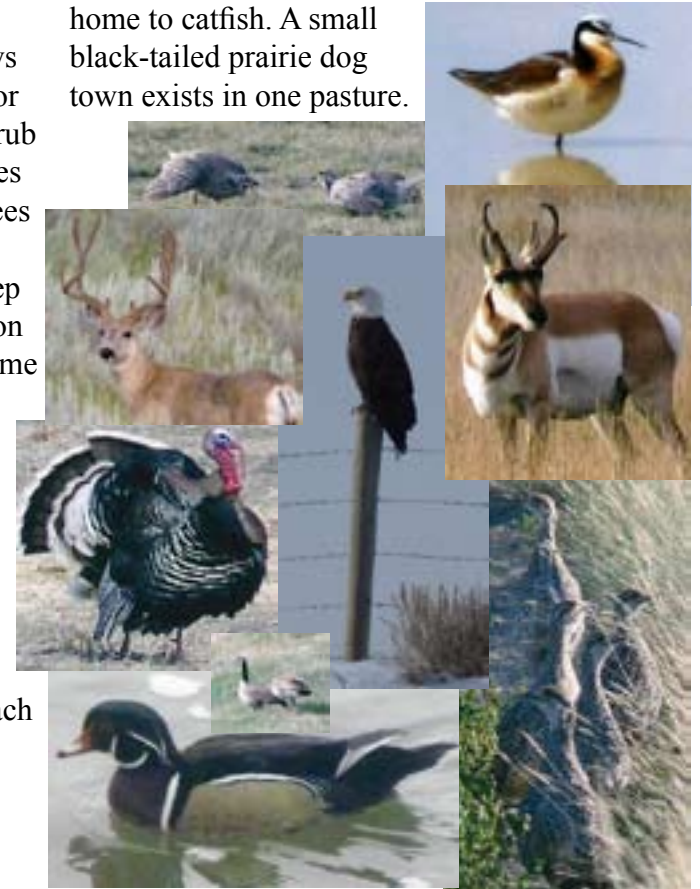
O'Fallon Creek runs for three miles through the ranch south to west, and Pennell Creek runs six miles from east to west to their confluence in a south pasture. The two creeks are dependable sources of livestock water for the spring, summer and fall seasons; however, winter watering is undependable at best, and at times dangerous due to ice and beaver dams. Two pastures have breaks roughly 200 feet deep that shelter cows in winter. The meadows along O'Fallon and Pennell Creek are ideal for feeding hay when the snow gets too deep. Scrub juniper and creeping juniper cover the hillsides in the break pastures. Cottonwood and ash trees provide protection in the meadow pastures.

During the early years, the Almys ran sheep as well as cattle, but coyotes were very hard on sheep and profits, and in 1964 Keystone became a cattle-only operation. In 1968, an artificial insemination program was started. Today Keystone AIs as many cows as feasible, sells steer calves off their mothers and winters all heifer calves. In the spring, yearling heifers are pelvic measured and sorted to be spayed or bred. A few of the very best AI-sired bull calves are retained for breeding. Fifty to 100 bred heifers are carefully selected and sold each fall.

### *Wildlife & Hunting*

Since 2004, Keystone Ranches, Inc., has been enrolled in Montana's Block Management Program that fosters public hunting on private lands, with an annual average of 400 hunter days and a recent "Satisfactory" rating on a state survey. The Almys rent out spare cabins

and houses to hunters and vacationers, hosting guests from all over the United States. Sharptail grouse, sage grouse, Hungarian partridge, wild turkeys, ring-necked pheasants, and Canada geese all breed on the ranch. Whitetail and trophy mule deer are in good supply through decades of careful hunting. Beaver are busy in Pennell Creek and an occasional river otter shows up on O'Fallon Creek, which is also home to catfish. A small black-tailed prairie dog town exists in one pasture.



*Sharptail grouse, top left and bottom right, a Wilson's phalarope, top right, mule deer, top left, pronghorn, middle right, bald eagle, center, tom wild turkey, middle left, Canada geese, small inset, and wood duck, bottom left call Keystone Ranches home.*

### *The Future of Keystone Ranches*

The Almy family has decidedly diverse interests and occupations. Bill was raised in Pennsylvania, studied for a time at the University of Pennsylvania and served in the Army Air Corps before deciding to head west. Through a neighbor in Pennsylvania he was directed Albion, Mont. where he took his first ranch job in 1948.

“I came from a family that had no agricultural background at all,” Bill said. “My brothers and sister have all gone in different directions.”

Bill’s sister, Gertrude, was a Jeffersonian history scholar, now retired; brother John was a chemistry professor and is a wine making consultant in Spain and France; Charles is a stockbroker in Charlottesville, Virginia; and Christopher is a district attorney in Maine.

The Almy family motto, translated from original Latin, is “On our own wings we rise.” Bill and Joyce have four children, two sons, two daughters, that all have gone in their own directions as well.

“We always told them, just because their dad was a rancher, they didn’t have to be,” Joyce said. “Then later, we realized that we never told them they could be.”

William Almy, III, owns and operates a specialty trucking business in Wichita, KS. Curtis Almy is a financial advisor in Miles City, and helps his mother-in-law operate her ranch. Dawn (Almy) Lamoreux lives in Las Vegas where her husband is a tax and estate attorney. Elizabeth (Almy) Solberg is a regional technologist based out of Keystone Ranches in Ismay, but travelling all over the U.S. for her

work. Bill and Joyce have 12 grandchildren. Keystone Ranches, Inc. is ready to hand the reins to the next generation when the time is right.

### **SECTION II - SUSTAINABILITY ON THE GROUND**

Since 1960, the Almy family has raised the carrying capacity of the land by almost 50 percent, cut their debt-to-asset ratio from 55 percent to under 15 percent, improved wildlife habitat, maintained long-term relationships with employees, and supported their eastern Montana community. Their success can be attributed to innovative water development and grazing management in cooperation with groups and agencies such as the Bureau of Land Management (BLM), Fort Keogh Livestock and Range Research Laboratory, the U.S. Department of Agriculture’s Soil Conservation Service, Montana State University Extension, and the Natural Resources Conservation Service (NRCS).

In eastern Montana, normal stocking rates run from 35-40 acres per cow for a 10-month grazing period. In 1960, the carrying capacity of Keystone Ranches, Inc. was calculated at 600 animal units. Today, Keystone Ranches carry approximately 450 mother cows and 300 yearling heifers. Today’s cows average more than 1,250 pounds, up from 1,050 during the 1960s. In 1960, the 150 yearlings weighed 800 pounds and today the yearlings weigh closer to 950 pounds. Today the carrying capacity is approximately 900 animal units considering the adjustments for the larger cattle.

The Almys concluded that a two-thirds cow/

calf, one-third yearling stocking rate is a good solution to highly variable annual grazing, using forage production and drought frequency figures from the nearby Fort Keogh Livestock and Range Research Laboratory. Data show that yearlings put on 70 to 75 percent of their normal summer gain by the beginning of July. That is also when range forage production has peaked. When drought is imminent, the Almys sell the yearlings. “This allows us to hang on to the cows and calves in the spare pastures vacated by yearlings,” Bill said.

### *Farming & CRP Land*

The Almys dabbled in wheat farming in the 1970s, when cattle prices were down and wheat was five dollars a bushel, and found some success early on. They broke and farmed more than 2,200 acres. However, the venture became plagued by drought years, conflicts between calving and spring cropping, cheat grass encroaching on stands of fall-seeded winter wheat, and shrinking wheat prices. Rising cattle prices encouraged them to change their approach. Then in 1988, the Conservation Reserve Program (CRP) seemed to be a good income-producing alternative, so the Almys enrolled 1,650 acres. Today, the Almys alternately crop 300 acres and fallow 300 acres of their best lowland alluvial soils using no-till, chemical-fallow methods. The vast majority of soils on the ranch are best left undisturbed, and as the Dust Bowl taught, grazing is the best practice for such land. The CRP acres have enhanced the wildlife populations and hunting opportunities on the ranch.

### *Water Development, Cross Fencing & Grazing Distribution*

By the fall of 1961, the Almys realized that some deficiencies on the ranch needed to be addressed. Porous soils dried out four of eight reservoirs. Two of the wells pumped by windmills had been drilled at the lowest possible locations to save drilling costs. Unfortunately, those sheltered low points also saw the least wind, and the stock tanks often ran dry. Thus, water development and livestock distribution has been a main focus for the past 50 years.

In the first years of running Keystone, the Almys noticed how intermittent creeks cutting through the corners of two of the largest pastures resulted in very poor livestock distribution and considerable riparian damage. They drew up a conservation plan for the eastern part of the ranch with advice from their USDA Soil Conservation Service office and their county Extension agent. They started a cooperative deferred-rotation grazing plan with the BLM for the western part.

In the summer and fall of 1962, BLM built five new reservoirs in an eight-section pasture and provided material to build a two-mile division fence. That summer, the Almys fenced out O'Fallon Creek in the northwest corner. In the mid 1970s, they divided the eight-section pasture again (see inserted maps on pages 6-9). Unfortunately, the five reservoirs built by the BLM, and another by the Almys in 1962, are unreliable today. Most have silted in by two-thirds over time, and inconsistent water runoff compounds the problem. That experience has fueled the Almys' drive to switch to wells, tanks

and water pipelines.

On the eastern portion of the ranch, the Almys subdivided a seven-section pasture into five smaller pastures, fencing off Pennell Creek in the process (see inserted maps). In the 1970s, under the auspices of a Great Plains contract, the Almys trenched in six and a quarter miles of pipeline six feet deep using the flexible PVC that had just become economical and commercially available (see inserted maps).

Wells are the main water source on Keystone Ranches. One well was three miles from an electric line, and would have cost \$22,000/mile to connect. The Almys opted for a diesel-electric generator. Two miles north and 230 feet in elevation higher, a 33,000-gallon railroad tank car was buried for storage, feeding a gravity-powered water delivery method such as used by many municipal systems. A "tip up" flag system allows the Almys to gauge the tank car's water level from three miles away.



This initial water line project proved so successful that another one was developed based on a windmill in another pasture. It pumped water into a 10,000-gallon railroad tank car. Because the 10,000-gallon tank elevation is 48 feet higher than the original 33,000-gallon "flag tank," the Almys decided to interlink the two systems. From the well in section 27, they can pump water to either tank. Valves are arranged so water from the windmill can flow directly to the flag tank (see inserted maps).

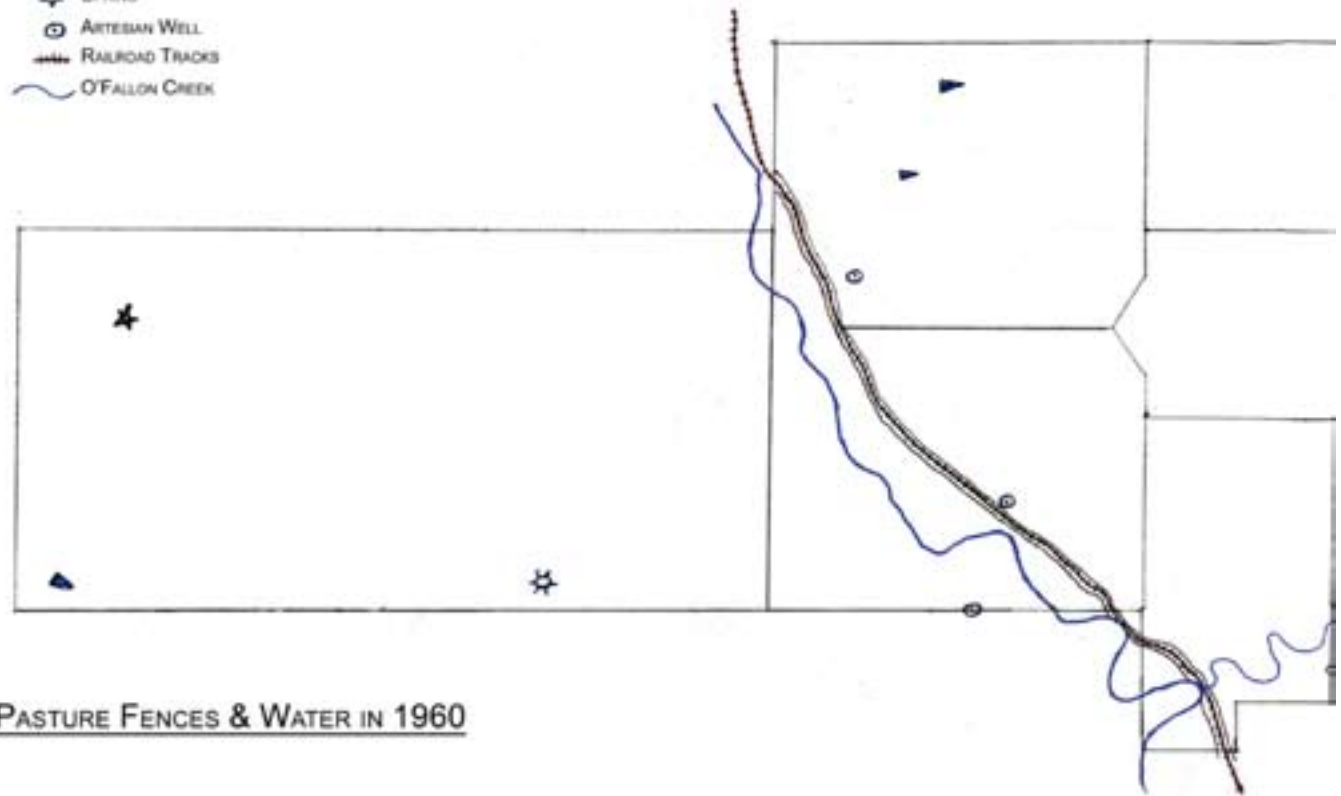


In Pasture D, another windmill pumps into a 15,000-gallon storage tank that feeds into three pastures. In the summer of 2008, the BLM installed six and a half miles of pipeline in three pasture subdivisions. Another 33,000-gallon railroad car at the highest point in this system provides storage and pressure to seven watering stations. Again, it was three miles from the well to electricity, and again a diesel-electric generator was installed. A windmill in Section 19 is devoted entirely to the Conservation Reserve Program pumps directly into an 8,000-gallon tank, used when drought or the need for vegetation renewal cause the

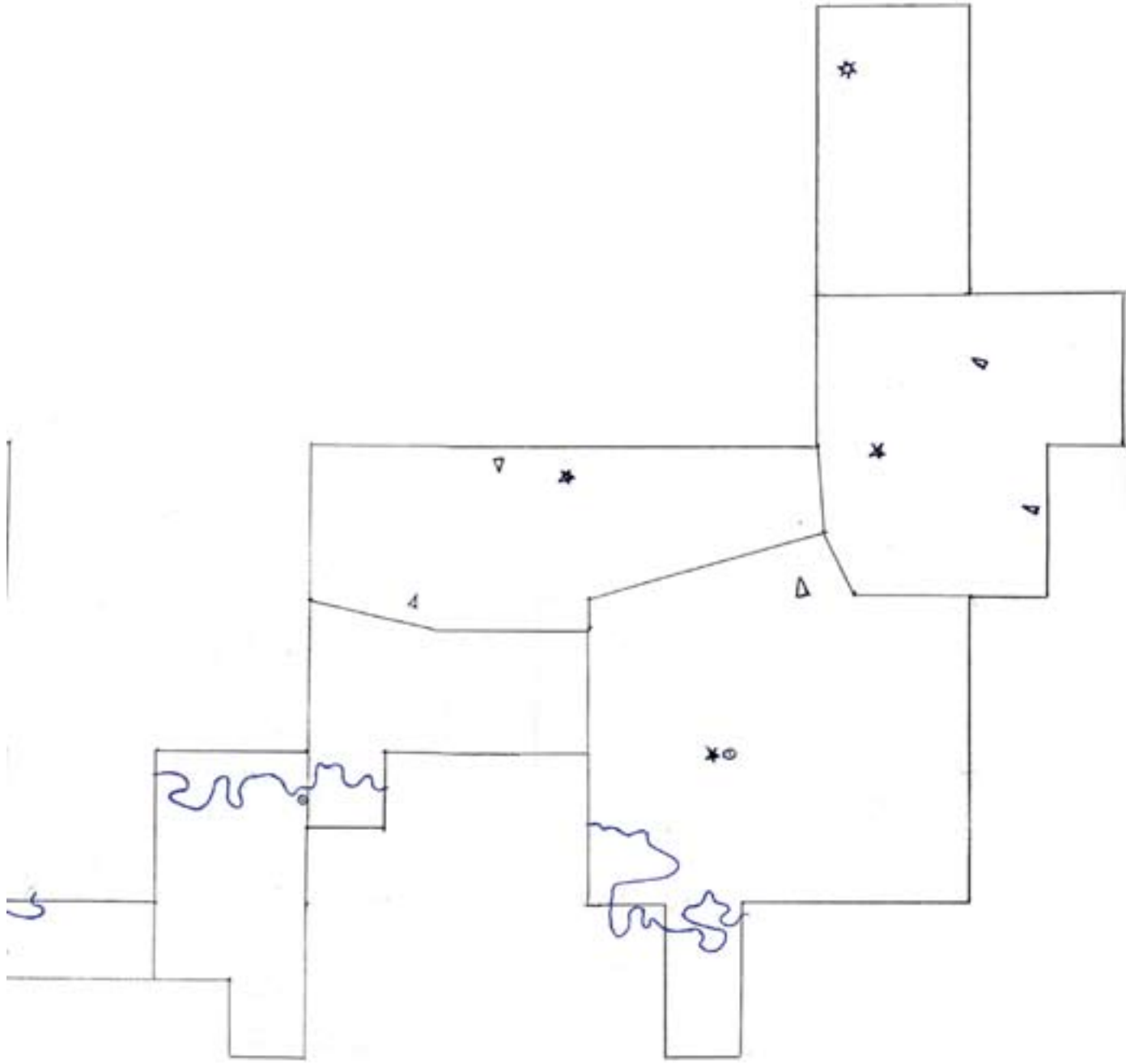
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LEGEND

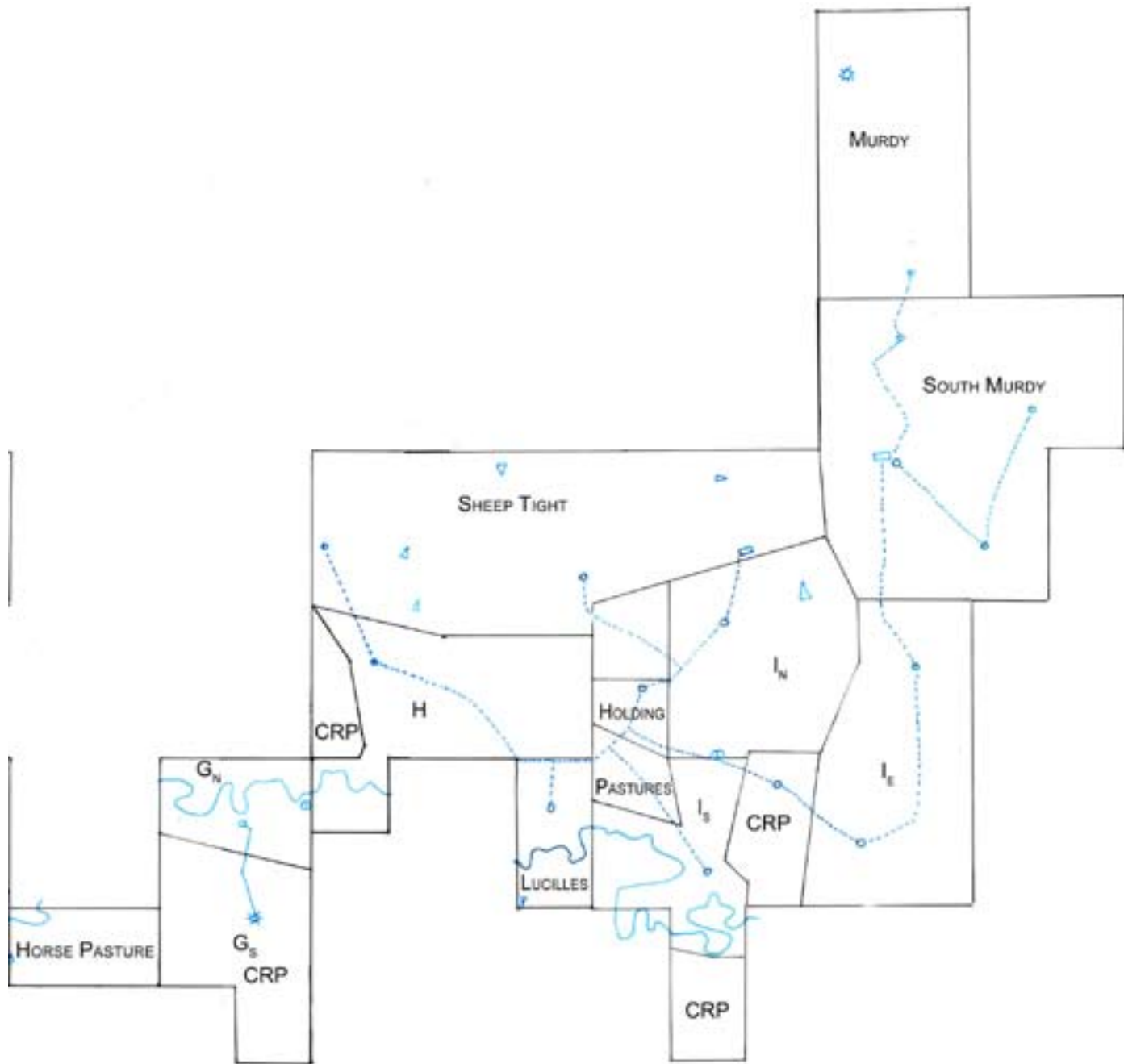
- ✱ WINDMILL
- ▲ RESERVOIR
- ✱ SPRING
- ⊙ ARTESIAN WELL
- RAILROAD TRACKS
- ~ O'FALLON CREEK



PASTURE FENCES & WATER IN 1960







government to allow grazing, about one year in four.

These cross fencing and water distribution improvements allow the Almys to graze cool-season and warm-season grasses, shrubs, and forbs on a sustainable schedule. Three pastures have good stands of crested wheat grass, ideal for early grazing. Two more are badlands with lots of shrubs and forbs ideal for fall and winter seasons. Both the Pennell Creek and O'Fallon Creek riparian areas are improving. A pasture to the north is an ideal bull-wintering pasture, having a 15 gallon per minute artesian well and abundant scrub cedars for protection.

Below is a list of fencing and water development projects on Keystone Ranches since 1960 with credit to respective agencies that cost-shared the improvements.

Cross fencing (15 miles): Keystone, 11 miles; BLM, 2 miles; NRCS, 2 miles.

New reservoirs (11): BLM, 7; Keystone, 3; NRCS, 1.

Springs (2): BLM, 1; NRCS, 1.

Water storage tanks (6): Keystone, 110,000 gallons.

Watering stations along new water lines (25): Keystone, 14; NRCS, 11.

New wells (7): Keystone, 5; BLM, 1; NRCS, 1.

### *Flood Irrigation*

A flood irrigation diversion out of Pennell Creek was in place when the Almys bought the ranch. Since then, they have modified and improved the original diversion structure with

a railroad tank car-cum-culvert and a head gate modeled after a roll-top desk cover and made of recycled materials. They added two more miles of diking to the existing water-flooding project. Four additional head gates and half a mile of dikes were added to divert water to the north side of Pennell Creek.

Using the floodwaters of another draw, the Almys developed a dike flooding system and one-mile contour dikes on a section. In trying to keep all the water on the land, the Almys have diverted six other, smaller, side draws that flood only at snowmelt time. Overall, there are 48 miles of contour flooding dikes that benefit 577 acres of hay land, up from 20 miles when the land was purchased.

### *Manure Management*

Keystone pastures and feedlots near Ismay all drain into a natural slough, thereby preventing any live water contamination. A recent state water-quality inspection found the system satisfactory. Manure is cleaned out of corrals and holding pens every three years, and distributed on both the Almy's and neighbors' nearby pastures and fields.

### *Weed Control*

Controlling noxious and other invasive weeds is a constant battle. Spot spraying is done off a patrolling four-wheeler, while a GPS device is used in the cropland chemical fallow spraying of known infestations for maximum efficiency, precision and minimal overspray.

### *Animal Care and Recycled Materials*

Three livestock "crowding tubs" on the



ranch (and one installed at the Baker livestock operation) reduce livestock injuries due to stress and pile-ups, as does a hydraulic low-stress cattle handling chute. Those and many corrals, fences and watering points use materials recycled from the Cedar Creek Anticline oil field, centered at Baker. Discarded sucker rods, oil field tubing, and cables both large and small are all readily available. An old school bus houses a generator, and worn-out tractor tires get a second life as feeders. The generators are currently capable of using bio-diesel fuel, and there are long-term plans to add or convert to solar panels.



### **SECTION III – OF INTEREST TO A CONSUMER**

Sustainable environmental stewardship has been the foundation of the Almy family's Keystone Ranches operation for over 50 years. More than 80 percent of the ranch's land is undisturbed, still nurturing the same native species that the Lewis and Clark Expedition saw when it passed through the region in 1806. The ranch uses native and introduced species in harmony with each other and the land. The Almys raise a mix of cow/calf pairs and yearlings which allows flexibility to care for the land in the face of drought cycles and climate change, while maintaining the herd's genetic heritage. The Almys have carefully adapted their genetics to fit the needs of the land and the market. Fences and watering facilities at strategic locations encourage livestock and wildlife to use the range evenly, protecting the land and the plant species that grow there. Every drop of rain and snowflake that falls on the ranch is captured in reservoirs to benefit the soil, plants, livestock and wildlife during the dry season. The Almy family has industriously recycled materials from a nearby oil field to construct their watering facilities and corrals. Keystone is ready for the next generation to step in when it is time.

### **SECTION IV – INDUSTRY & COMMUNITY LEADERSHIP**

Bill and Joyce Almy have been involved with industry and community organizations at the local, state and national level, and both are well versed in public speaking and persuasion. Bill demonstrated his salesmanship, organizing

and leadership abilities with the Baker livestock market.

In the summer of 1969, seeking better marketing opportunities, Bill joined a group of Baker, Mont., businessmen and local ranchers/farmers interested in building a livestock auction market. Baker Livestock Auction opened for business late in 1970. However, the first manager was totally overwhelmed in the first month and the board appointed Bill acting manager, based on a single season's experience in the Belle Fourche, SD, stockyards 11 years earlier. By 1974, annual cattle sales reached 40,000 head and hog numbers were at 22,000 head, due in part to the Almys' communication and people skills, while revenue exceeded expenses by a wide margin. However, the auction occupied 90 percent of his time but supplied only 10 percent of his income so Bill felt it was time to step aside. "Ranching might be difficult, but it's a cinch compared to running an auction market," he said.

Bill was recalled to duty during the summer of 1988, when record drought and peak grasshopper infestations forced area stockgrowers to cut their herd sizes. The Baker Livestock board again asked Bill to step in and run the auction. By 1989, Bill and Joyce bought the auction outright as partners. With the advent of cattle sales by video auction, Baker Livestock Exchange affiliated with a national video company, which doubled, even tripled, the base of buyers and sellers. They advertised the video component as a chance to "have your herd shot round the world." They sold Baker Livestock Exchange in 2000, and now have a slower-paced sideline business called Ismay Livestock

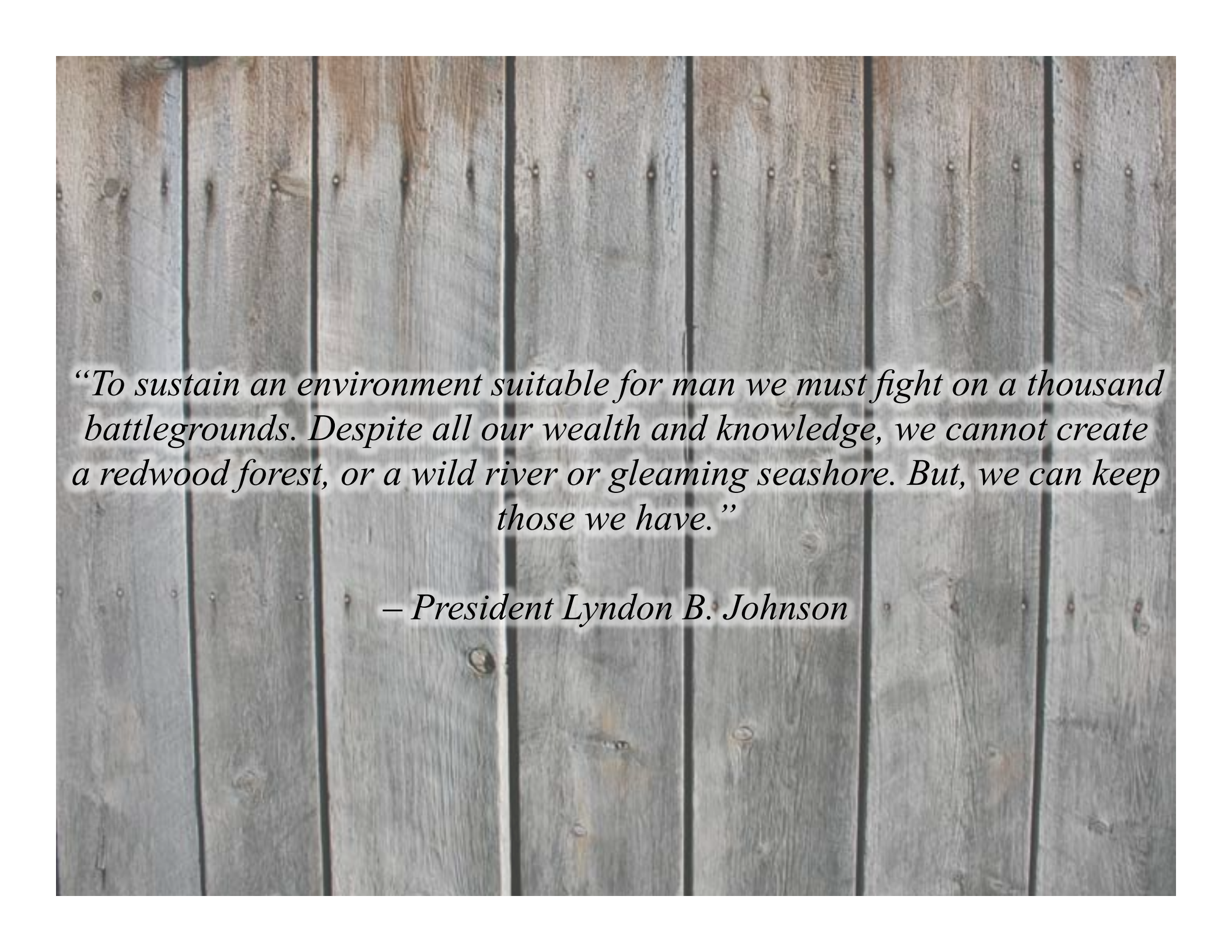
Yards to buy and sell cattle.

In community service, Bill has served as a school board member, an Ismay Town Council member, and mayor. Joyce was involved with Baker CORE group, an area economic development organization, and has served as a lay leader and adult Sunday school teacher for the United Methodist Church of Townsend. They both served as members of the Broadwater County Food Pantry Board of Directors.

Bill was given his initial membership in the Montana Stockgrowers Association in 1950 as a Christmas present by a former employer. A long-time Toastmaster, he has served on the Montana Beef Performance Association Board of Directors, was president of Montana Association of State Grazing Districts where he organized events, and was a member of Montana Public Land Council, the Montana Grain Growers and the Montana Farm Bureau. At the national level, Bill served on the Producers Advisory Council for the Fort Keogh Livestock and Range Resource Laboratory, winning an award for "Outstanding Contributions" in that service. Keystone Ranches is a member of the National Cattlemen's Beef Association.



*Looking forward to the sustainable future of Keystone Ranches, Inc.*



*“To sustain an environment suitable for man we must fight on a thousand battlegrounds. Despite all our wealth and knowledge, we cannot create a redwood forest, or a wild river or gleaming seashore. But, we can keep those we have.”*

*– President Lyndon B. Johnson*