

a recreational wilderness for albertans



ELBOW SHEEP WILDERNESS

the elbow-sheep headwaters
a recreational wilderness

THE ALBERTA WILDERNESS ASSOCIATION
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Appreciation is hereby expressed to the Alberta Departments of Lands and Forests, Environment, and Mines and Minerals, and to their civil servants who have assisted in the gathering of certain of the data presented herein.

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James R. Eickmeier,
Chairman - Elbow-Sheep Study Committee

INTRODUCTION

Several decades ago, men with foresight saw fit to bless Alberta with the establishment of National Parks so as to preserve our scenic heritage in its natural condition for future generations. Although commercialism has crept into the Parks, their existence is appreciated by people all over the world.

More recently, other men with foresight have arranged for the setting aside of Provincial Parks, Wilderness Parks and Wilderness Areas. However, in that portion of Alberta which lies south of the Bow River, the only zones of consequence that provide any form of Wilderness protection are a small corner of Banff National Park, Waterton Park and the Cypress Hills Provincial Park. The wilderness portions of these parks are inadequate for the recreation demands placed upon them by the populace of southern Alberta, and to complement these parks Wilderness Recreation Areas could and should be established. The Forest Reserve Lands in the Foothills and along the eastern slope of the Rockies were originally dedicated to the perpetual use of the Canadian people. They have been entrusted to Albertans to manage, and it is now time to wisely decide how these lands should be used.

The Elbow-Sheep River headwaters encompass a broad range of terrain, wildlife and plant growth within the Forest Reserve and except for some fire access roads most of the area has been relatively undisturbed by the activities of man. The grassy mountain meadows and protected upland valleys provide ideal summer and winter range for sheep, goat, elk, moose, bear, deer and various lesser fauna. These areas can also provide solitude and relaxation for the harried urban dweller. Herein it is proposed that a Wilderness Recreation Area of some 560 square miles be designated. The area is referred to as the Elbow-Sheep Wilderness throughout this study.

Few people will dispute the importance of industry and technology to our standard of living. However, a high standard of living has little true meaning if there is no place to enjoy the leisure time which is a major by-product of our technology. Under the present scheme of virtually unlimited resource development and access road construction, it is becoming increasingly difficult to escape from the pressures of our industrialized society. Where only a few years ago many areas qualified as wilderness by virtue of their inaccessibility, this is no longer the case. The decision to provide legislative protection for areas such as the Elbow-Sheep Wilderness is one which can no longer be delayed.

It is recognized that even in the relatively undisturbed Elbow-Sheep Wilderness there are many land use demands in the form of resource developments. Unfortunately there no longer are areas in Alberta without such demands and unless firm policy decisions are taken now, the opportunity to preserve wilderness may be lost for all time.

It is also recognized that there are many recreational activities which are of a more intensive nature and as such are not appropriate within a wilderness, i.e., snowmobiling and use of all-terrain vehicles. These activities could, however, be carried out in the lower valley areas within the Forest Reserve but outside the Wilderness boundary. Car camping is a rapidly growing leisure activity,

and immediately bordering the Elbow-Sheep Wilderness a series of campsites have already been established. These sites could thus act as "jumping off" points for day or even overnight travel within the Wilderness. In the sense that a wide spectrum of outdoor recreational activities will be accommodated (but not all within the designated Wilderness), reference is and will be made to the Elbow-Sheep Wilderness as a Recreational Wilderness.

Wilderness can be defined as an area where man can practice the art of wilderness travel. It is an area which offers "outstanding opportunities for solitude and for primitive and unconfined types of recreation". It is an area of undeveloped land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural condition. It is an area where man is a visitor who does not remain. It is above all an area without roads and other man-made disfigurements and it is an area from which all forms of mechanized equipment are excluded.

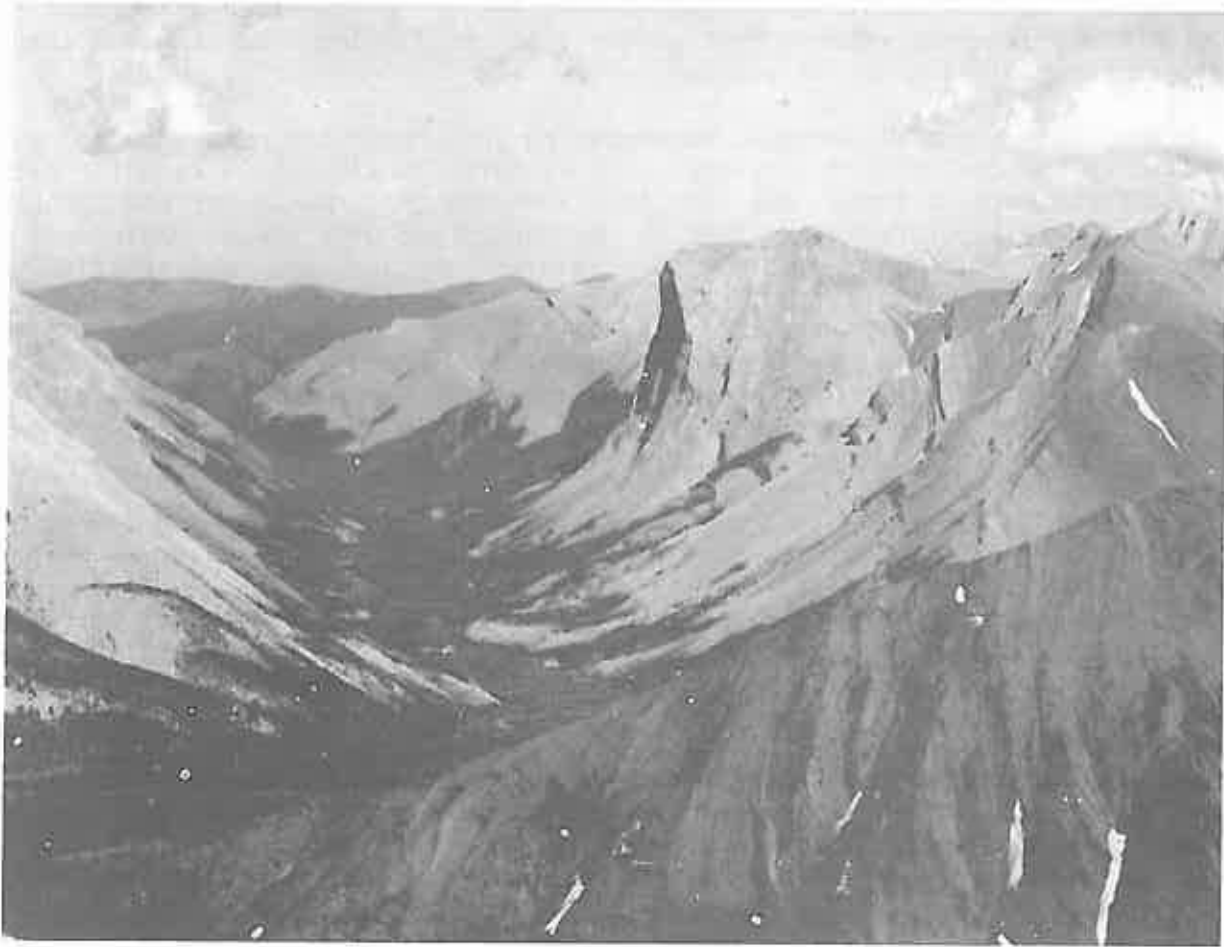
The most important components which one associates with wilderness are trophy, sense of isolation, change of scene from everyday life, perception of natural processes, and the sense of husbandry¹. Trophy is the simplest and most obvious component; the outdoorsman seeks, finds, captures, and carries away. The trophy, "whether it be a mess of trout, a basket of mushrooms, the photograph of a bear, the pressed specimen of a wild flower, or a note tucked into the cairn of a mountain peak, is a certificate ... and the pleasure these trophies bring is, or should be, in the seeking as well as getting"¹. The feeling of "isolation in nature" is a subtle and complex component, and yet is possibly the most appreciated aspect of most wilderness experiences. "Change of scene" can be thought of as another component which, although not unique to wilderness, is an integral part of the recreational experience within wilderness. The perception of the natural processes by which the land and the living things upon it evolved, and by which they maintain their existence, is the fourth component of the wilderness experience. The final component, sense of husbandry, is reserved for the outdoorsman or the land manager who has the perception and the feeling to work directly for the wise use of the wilderness resource.¹

Man can use wilderness without unduly changing it; he can use it for science, for wildlife, for recreation. Wilderness can be considered as a resource, "a resource which can only shrink, but never grow".¹ The Elbow-Sheep Wilderness should be set aside primarily for the benefit of hikers, climbers, riders, hunters, fishermen, bird watchers, painters, photographers, cross-country skiers, etc. It can, nevertheless, provide for the perpetuation of many wildlife species, and be used, at least in part, for ecological or scientific purposes.

Almost all of the wilderness components can be lost or destroyed by over-use. It is partly because the Elbow-Sheep headwaters are in such close proximity to Calgary and constitute a prime recreation area that the need exists for wilderness protection. Here then is a challenge for recreational planners and managers,

Quotes and paraphrasing from Aldo Leopold's "A Sand County Almanac".

... a challenge that does not involve the promotion of mass-use recreation, but rather requires the provision of wilderness to stimulate the recreationists' perception, ... a challenge that requires the building not of roads and toilets, but of building a true appreciation of nature in the minds of the human visitors.¹ If this challenge is met, and met successfully, then perhaps we, and our children after us, can continue to derive pleasure from wilderness contacts with nature.



CONCLUSIONS AND RECOMMENDATION

It is quite apparent that a need exists for establishing user-oriented wilderness areas in the southern portions of the Province. The Alberta Wilderness Association recommends that the Elbow-Sheep Wilderness, encompassing an area of some 560 square miles, be given statutory protection as a recreational type of wilderness. The Alberta Wilderness Association would encourage that this most important proposal be the subject of separate public hearings in order that all interested parties have the opportunity to present their views.

It is recognized that amendments to the present Wilderness Act will be required in order to provide statutory protections for the Elbow-Sheep Wilderness as a user-oriented Wilderness wherein such activities as fishing, hunting, horseback riding, and berry picking can be allowed.

The Elbow-Sheep Wilderness, encompassing both foothills and the front range, is ideally suited for wilderness status. It is sufficiently large to offer a true wilderness experience to those who seek it. The area can provide for the practice of the art of primitive travel, by foot or by horse, and with proper management and under strict regulation can continue to provide Albertans' the satisfaction that comes from a successful stalk, be it trout or big game. The main criterion of which to base activities should be a simple ban on the use of mechanized or power-driven forms of transport. Within the Wilderness there may be areas where it is desirable to impose strict statutory protection as provided for by the present Wilderness Act. Designation of such ecological reserves should, however, be made only upon the recommendation of land managers and natural scientists.

There are numerous land use demands on the area and it is quite evident that many of the land uses are incompatible, i.e., strip mining on prime bighorn sheep or elk grazing range. It is also apparent that if resource exploration and commercial developments are to be given precedence then the opportunity to establish Wilderness Areas no longer exists. Consequently, if new Wilderness Areas are to be established, land use policy decisions are required. Perhaps as much effort will have to be directed in future years towards obtaining clear titles as has previously been expended towards the granting of resource exploitation rights. Adequate compensation must be provided to companies or individuals who may be adversely affected by a re-designation of land uses. In this regard it should be noted that in the case of the Ghost, Siffleur and part of the White Goat Wilderness Parks, the mineral lease holders were allowed to exchange their leases for others outside the Wilderness Parks.

At the present time no provincial department or semi-independent Board has a specific responsibility for reviewing and making recommendations on establishing Wilderness Areas. Proposals therefore must be forthcoming from the citizens of Alberta and the final decisions will rest with the elected representatives of the people. Decisions of a political nature, nevertheless, are too often made on the basis of short-term tangible factors. In the case of wilderness the social and ecological factors and even the intangible factor of wilderness environment must be considered. It is, after all, the "quality" of life for Albertans and for their children upon which the final decisions should be based.

DISCUSSION

COMPATIBLE AND NON-COMPATIBLE USES OF WILDERNESS

Within any proposed wilderness, consideration must be given to existing alternative land uses. Some uses may be compatible with wilderness status, others are not. Some activities could be tolerated on an interim basis, other activities might permanently destroy the wilderness environment.

One compatible use is the enjoyment of the scenic beauties. Quoting from a 1927 Department of the Interior brochure on the Bow River Forest (see Appendix B) we have the following comments: "One can say with absolute assurance that the scenic beauties of the Bow River National Forest, though they may be equalled, are unsurpassed by even the most famed beauty-spots of the world.... The nature lover may wander through the shadowy aisles of the heavy spruce and lodgepole pine forests; follow the murmuring brook, clear and icy cold as it trickles through the upland meadows on its way to the mountain torrent that rushes tumultuously eastward...."

Other compatible uses include encouragement of a broad range of outdoor recreational activities, including utilization of the fishing and hunting potential. Some individuals may view hunting, even if allowed only on a management decision basis, as an incompatible activity. Indeed in small Wilderness Areas hunting may not be desirable. However, for larger Wilderness Areas the prohibition of mechanized vehicular travel of itself would tend to maintain hunting pressures at a relatively low level.



The eastern slopes of the Rockies provide almost all the summer flow for the Saskatchewan River drainage system. Consequently, maintaining the source of supply is an extremely important compatible type of land usage. Because of its close proximity to Calgary the Elbow-Sheep headwaters require special protection in order to ensure a continuing availability of pure water for residential, commercial and industrial purposes.

Grazing is an activity which historically has been allowed in the Forest Reserve areas and if properly managed can be considered a compatible use.

Trapping activities are normally carried out on snowshoe or by ski and, as a primitive type of usage, need not conflict with the wilderness concept.

Industrial activities involving the use of motorized vehicles and requiring the construction of roads or rail lines are activities which are not and cannot be considered as compatible with wilderness.



AREA AND BOUNDARIES

As shown in the map on the following page, the Kananaskis-Highwood Forestry Trunk Road forms the western boundary of the Elbow-Sheep Wilderness. The north, east and southern boundaries are defined by existing road systems, land ridges and water courses. Along the southeastern boundary, it may be preferable to use legal description boundaries since heights of land are not readily defined.

It is proposed that vehicle access be permitted along the Sheep River access road to the Bluerock campsite. Vehicle travel along the connecting Elbow-Sheep River Road and along the Forget-Me-Not Mountain and Junction Mtn. fire tower roads would be restricted to fire protection and authorized research purposes. No motorized access would be allowed within the wilderness except for these purposes. It is hoped that even this limited use by the provincial government could be discontinued in favour of helicopter servicing of the lookout towers and aerial methods of fire control.

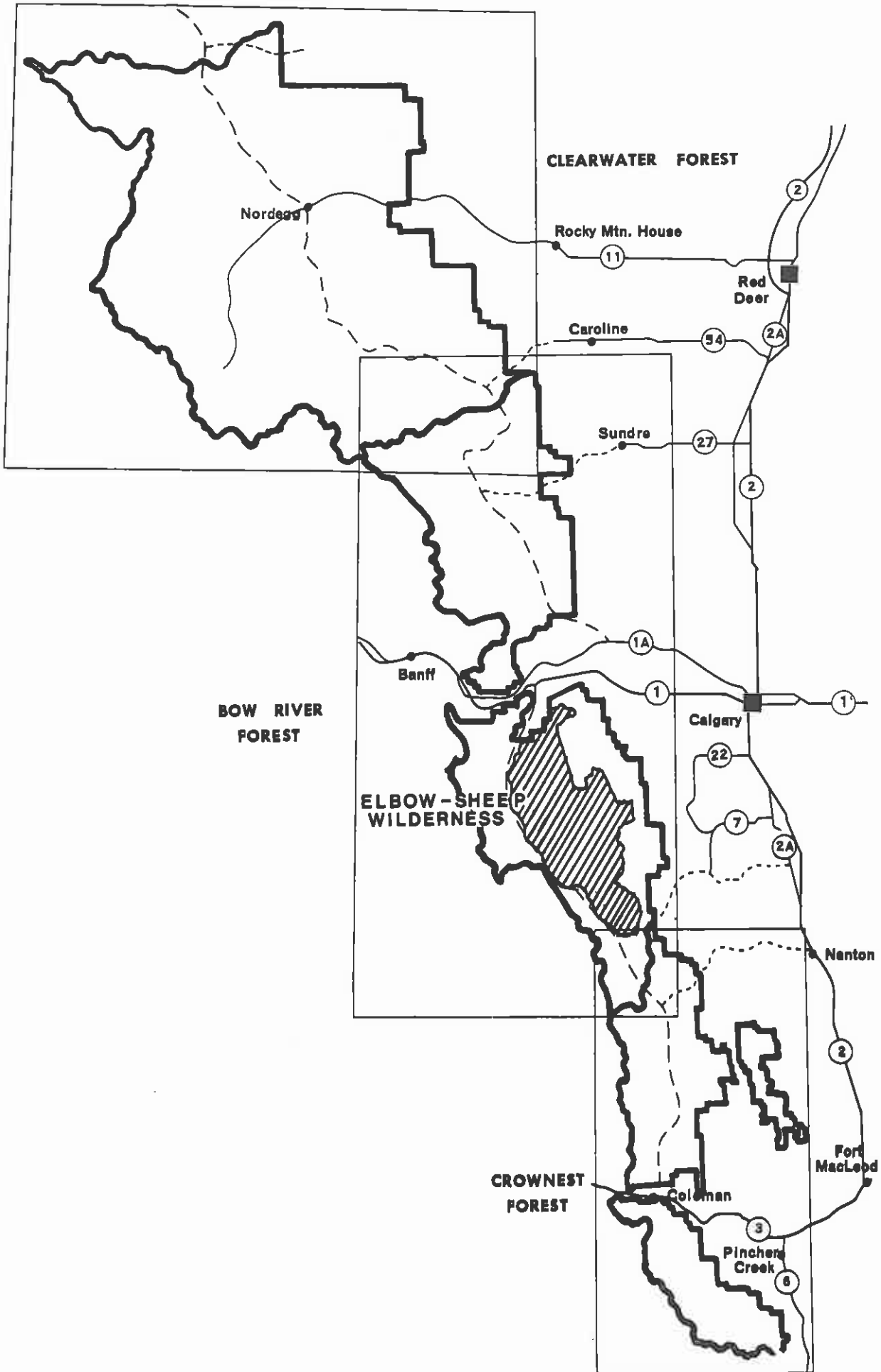
The Elbow-Sheep Wilderness encompasses some 560 square miles, or approximately 6 percent of Alberta's designated Forest Reserve lands. More than 70 percent of the land area within the Wilderness is above 6000 feet. The area contains the headwaters of the Jumping Pound, Elbow and Sheep Rivers and headwater tributaries of the Kananaskis and Highwood Rivers. That portion of the Wilderness within the Kananaskis watershed was included in the Rocky Mountain Park Reserve prior to the Transfer of Resources Act passed in 1930. The eastern portion of the Wilderness is part of the Bow River National Forest, which was "dedicated to the perpetual use of the Canadian people" when it was set aside by act of Parliament in 1911.

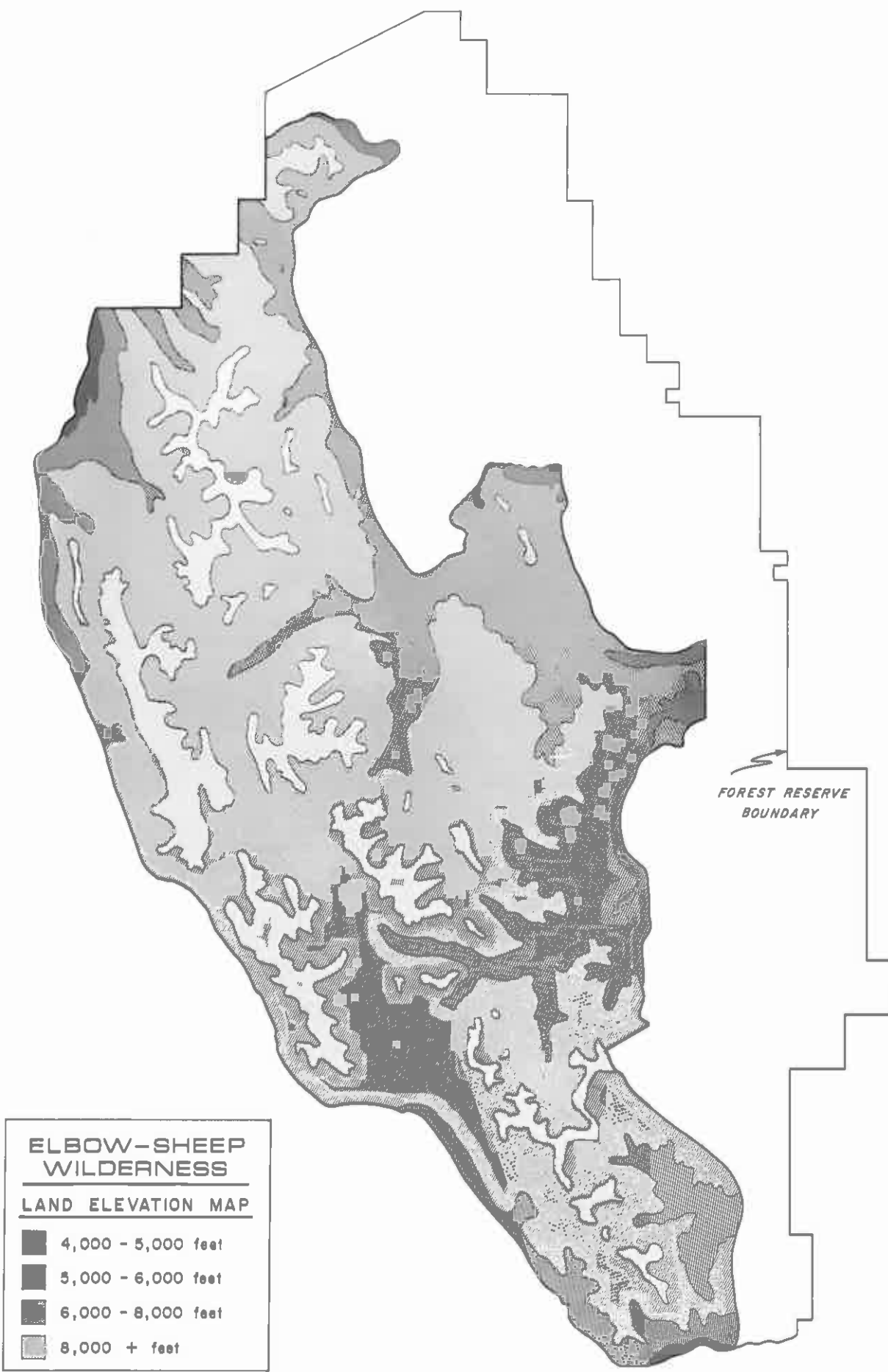
The geographical centre of the Wilderness is a distance of 42 miles from downtown Calgary. At its closest point the Wilderness is 25 miles from the southwestern boundary of the City of Calgary.

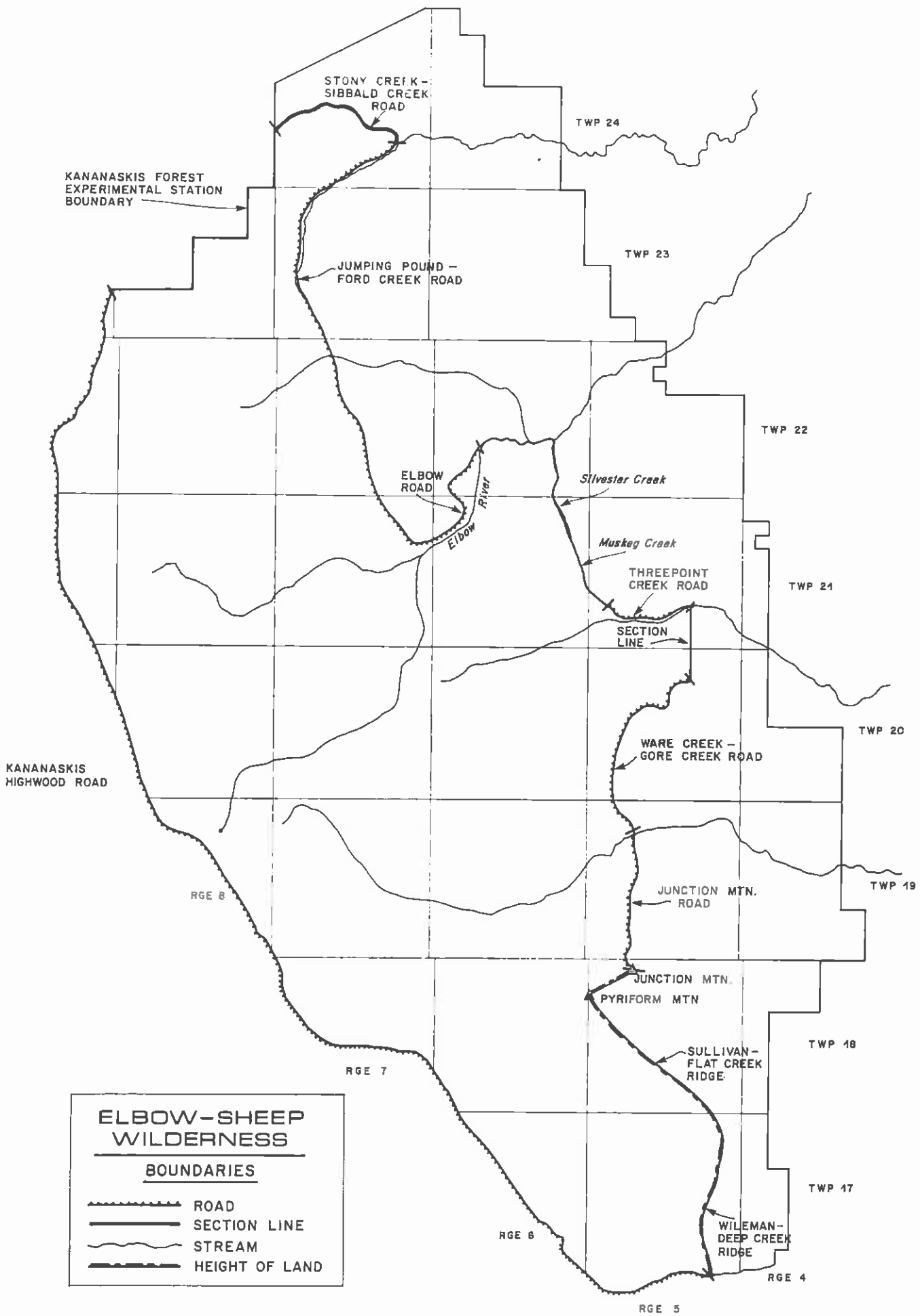
It should be noted that there are some patented lands within the Wilderness which appear to be owned outright by at least one individual and/or corporation and for which special considerations would have to be negotiated.

Maps of interest to the Wilderness user are listed in the appendix.









HISTORY

Before the white man laid claim on the land, the area under discussion was traditionally a hunting ground of the Stony Indians, a branch of the once powerful Assiniboine nation. Although the Stony culture underwent many adaptive changes from contacts with the Crees, their language remains much the same as that of their plains cousins. However, for generations, the Stonies have been mountain and foothills people, a forest people whose mainstay has been the game animals of woods and mountains with an occasional foray out onto the plains to secure buffalo.

Bordering the Wilderness Area are two ancient north-south trails which were used extensively by both the Stony and Kootenay tribes and in later times by early missionaries and explorers. As well as these two routes, there were several east-west links over the mountains that the Kootenays used. When making excursions onto the plains for buffalo hunting the Kootenays traveled through this region, usually making the trek in the spring and autumn.

The first of the actual north-south trails lay just west of the first range of mountains (Kananaskis-Highwood Valley). The Indian tribes who were traditional enemies of the feared Blackfoot on the plains used it in their frequent travels



north and south as this trail afforded some safety. The second important north-south trail ran the length of the eastern slope of the Rockies from west of Rocky Mountain House to Waterton Lakes. Crisscrossed and paralleled by old hunting trails, it was known as the "Stony Trail". It was easier travelling than the mountain trail, but not quite as safe from marauding parties of Blackfoot. The McDougalls and other pioneers travelled it from the North Saskatchewan to Montana before the prairie route was considered safe.

Invariably, clashes took place between the Kootenays, Stonies, and Blackfoot as each considered the other an infringer on their territory. There is an account of a raid around 1855 by the Blackfoot on a Stony camp just south of Sheep River on the west bank of a deep coulee not far from the Sheep River Ranger Station. Two of the Stony men went hunting early one morning while the other three remained in camp to take a sweat bath. A party of Blackfoot surprised the camp and the women and children fled west along the banks of the Sheep River until they were able to gain the seclusion of timber. The Stony bathers had time only to don their moccasins, shirts and belts before the attack began. One old woman, a sister of Chief David Bearspaw, remained with the three men and aided them by carrying a sack of shot right into the skirmish. The Stony men bravely held off the attackers and miraculously escaped being wounded, at the same time taking a heavy toll of the Blackfoot. When the shot bag was almost empty, the old woman picked up an axe, & danced and sang a powerful medicine song. At that moment, a cloudburst occurred which drenched the Blackfoot and dampened their powder. The Stonys on the west bank remained dry and kept sniping at the confused enemy. The old woman had demonstrated the fearsome powers of her people in bringing the mountain storm to their assistance, so the Blackfoot withdrew, leaving their dead in the coulee. Hastily the Stonys broke camp, gathered their horses and families and moved towards the headwaters of Sheep River where they felt sure the Blackfoot would not follow.

The early explorers also used these routes. In August of 1858, Captain John Palliser travelling north from the Waterton area to their camp at Old Bow Fort skirted the eastern slope of the mountains on an old Indian trail. From Old Bow Fort, led by his Stony Indian guide, he explored up the Kananaskis River and over into Kootenay Valley of British Columbia. Circling back through American territory, he again used the route flanking the mountains, and on September 11th camped on the Highwood River where he notes that "we killed two grizzly bears".

With the coming of white explorers, followed soon after by traders, missionaries and eventually settlers, the nomadic life of the Indians began to change. In 1877, the three bands of Mountain Stonies, along with the Blackfoot tribes, agreed to the terms of Treaty Seven and a reserve at Morleyville settlement was set aside for them. After 1885, the influx of white settlers brought the Stony Indians to a position where they could no longer find sufficient game. By 1892 they were forced to go as far as B.C., mainly via the Kananaskis Valley and passes, and into the hunting grounds of the Kootenay Indians. The authorities, fearful the results that these incursions might bring, pressed for an agreement between the two tribes. The outcome of the conference was an agreement that the Stonies were to hunt on the eastern side of the Great Divide and the Kootenays on the west.

Another traveller, Dr. George M. Dawson, the famous Canadian geologist on a survey in 1884 across Canada, passed through this region and named many of the natural features.

The history of ranching is also reflected in the area when the early ranches such as the Bar U and the Buffalo Head with leases on thousands of acres ranged their cattle, unrestricted by fences. The choice river bottoms of the Highwood and Sheep were favourite ranges. Even today, ranchers run their cattle in the forestry areas in the summer until round-up time in the fall.

Meanwhile, near the turn of the century, white civilization was putting new pressures on the natural resources of the eastern slope of the Rockies to satisfy the burgeoning needs for fuel. Outcropping of coal seams were a well known feature of this area, and early settlers often took advantage of this fact by having small diggings in various scattered locations. By 1896 detailed geological studies and prospecting trips were being undertaken in the area. A promising coal deposit comprising some 10,000 acres was located on the upper reaches of Sheep River. The proposed development, which included a railway into Calgary, was undertaken by Pat Burns, who obtained the leases, as the coal was found to be of such superior quality. A wagon road and a railway grade line were built, a power plant constructed, and the mine began operations. At the same time, another extensive coal field 15 miles south and east of the Burns holdings at Flat Creek was surveyed and the proposed mine was to be on the face of Mt. Head. However, with the advent of W.W.I and corresponding decline in markets for coal, all the grandiose plans of the various developers were dropped and mines eventually closed.

The area is also represented in the folklore of Alberta as the upper reach of the Highwood River is a reputed location of the famous Lost Lemon Mine. This legend of well over one hundred years is the story of the discovery of gold and subsequent murder of Blackjack by his partner Lemon. Witnesses to the happenings were Stony Indians who obliterated the scene of the murder and discovery. The story has been handed down through generations and today people still search and dream of discovery of the Lost Lemon Mine.

Historically, this region has become through the years a fascinating blend of the various elements of mountains, foothills, and plains. It remains as a unique feature in the landscape of Alberta.

GEOLOGY

The Elbow-Sheep Wilderness contains two physiographic units: the Foothills belt along the eastern boundary and the western mountainous section which forms a part of the eastern range of the Rocky Mountains. The rocks in the mountainous section are primarily limestones, dolomites and quartzites, whereas the rocks of the Foothills are sandstones, silts, shales and coals which occur in varying degrees of hardness. Coal seams ranging in thickness from 2 to 20 feet occur quite extensively throughout the area and are generally found in the Kootenay formation of the lower Cretaceous.

In the Foothills belt the higher hills are capped by resistant sandstones, while the valleys consist mainly of soft, easily weathered shales. The underground disappearance of some streams in the area can be explained by the presence of glacially-deposited gravel beds, and perhaps by some surface faulting.

The exposed rocks in the mountainous regions have an aggregate thickness of approximately 14,000 feet and range in age from Cambrian to Cretaceous. Fossils are encountered in the Mississippian limestone beds, however there are no publicized concentrations of fossil beds in the areas surrounding the Elbow and Sheep Rivers. Many small caves can be found in the eroded Mississippian and Devonian limestone beds, but major cave systems have not as yet been identified. One might also expect to find ice caves within the Wilderness since some are known to occur just outside the eastern boundary on Canyon Creek, but to date none have been reported.

A series of west dipping, northwest striking thrust faults are the predominant and controlling structural feature of the area. The faults have tended to move older strata on top of younger strata; consequently the overlying beds have come from further west than their present position would suggest. Movement along these faults ranges from several thousand feet to many miles. In addition, other structural features associated with the processes of mountain building, such as folds, or anticlines and synclines, can be identified.

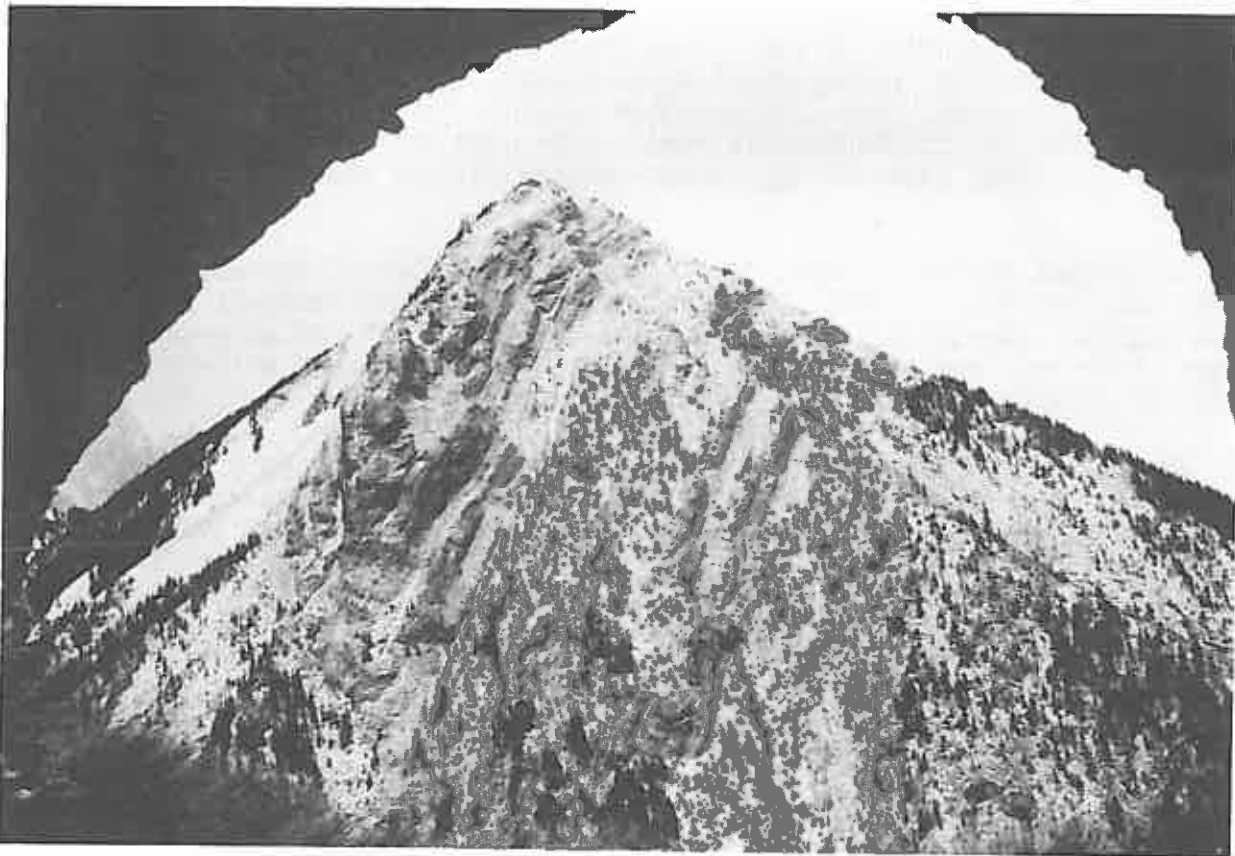


Travelling west along the forestry road from Bragg Creek toward the Wilderness the first significant geological feature one encounters is the Moose Mountain Dome, on Moose and Prairie Mountains. As the name suggests, this is a large domal structure, 15 to 20 miles long, formed from Mississippian rocks in its core and from a sequence of younger rocks ranging in age from Jurassic to Upper Cretaceous on its eastern flank. The western flank is complicated by minor faults. Travelling further west, beyond Elbow Falls, one enters the Wilderness, and two miles west of the junction of the Elbow and Little Elbow Rivers is Nihahi Ridge, the site of a major thrust fault

system. This system brings older Devonian rocks in contact with the younger Cretaceous sediments, forming the Nihahi syncline. The west limb of the Nihahi syncline becomes the east limb of an anticline whose axis runs northwest through Mount Romulus. These main structural features are complicated at depth by other thrust faults, resulting in a complex stacking of sedimentary rocks. This structural pattern is prevalent and repeated throughout the whole area.

Many of the large cliff faces are formed from resistant carbonate rocks of Mississippian and Devonian age. These rocks have been moved into their present position along thrust faults and then weathered to yield the spectacular scenery we have come to associate with the Rocky Mountains. Some examples within the Wilderness are Mt. Gibraltar and unnamed peaks in the Opal Range.

Glaciation has played a major role in the erosion processes, cutting large U-shaped valleys which have later been modified by stream action.



RECREATIONAL ASPECTS

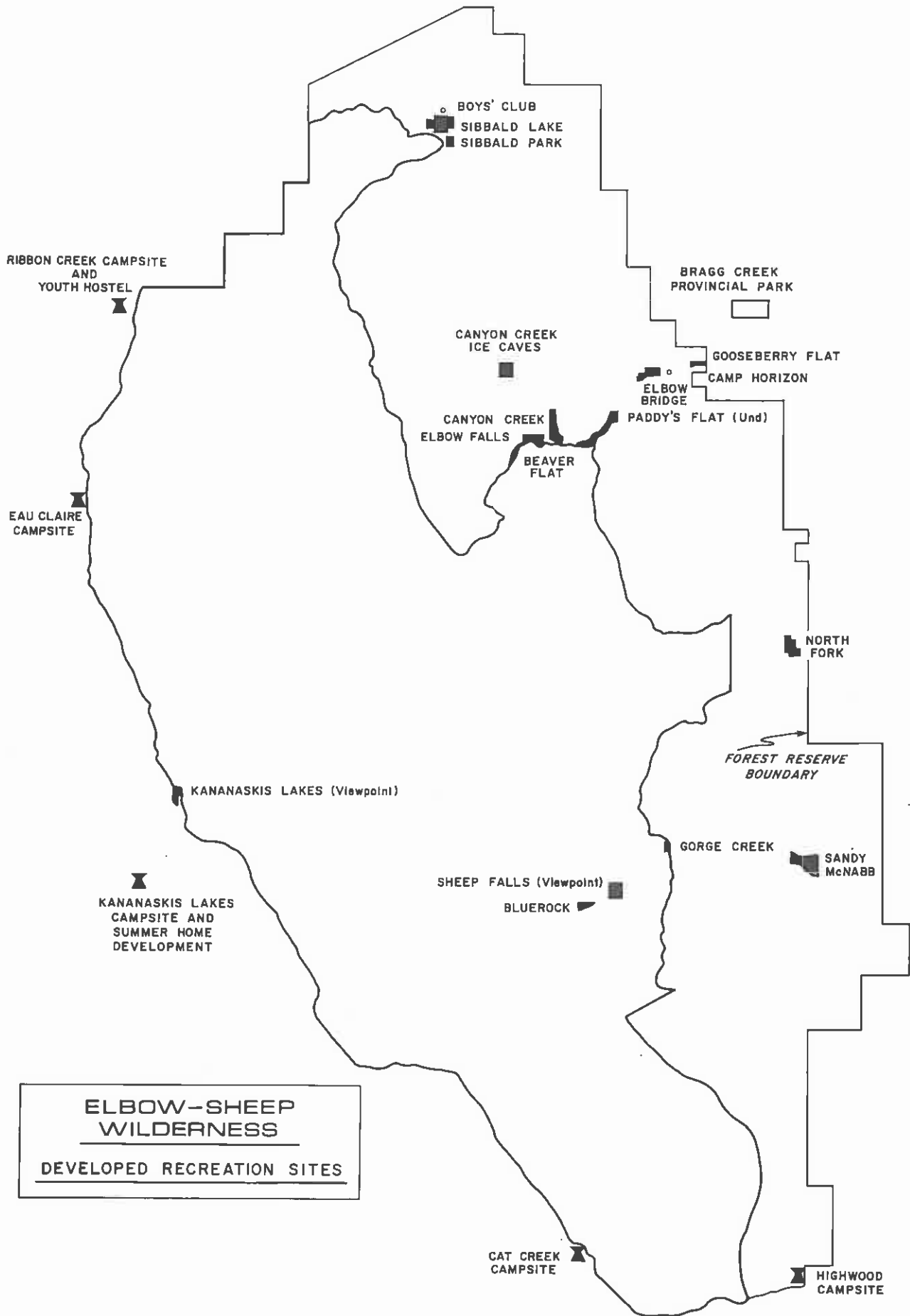
Calgary may have a population of close to 1,000,000 people by the year 2000. The trend towards a shorter work week and the increasing emphasis which is being placed on leisure time activities is already evident. General demand for "wilderness use" is projected to increase eight-fold by the year 2000 (United States Outdoor Recreation Resources Review Commission). The Elbow-Sheep Wilderness, by virtue of its location within a few miles of Calgary, is ideally suited to help meet this demand.

Numerous recreational sites have been developed in the areas immediately bordering the Elbow-Sheep Wilderness (see map on following page). It is only in the last several years that people have started to use these campsites in large numbers and yet already the summer weekend usage is overtaking facilities; this in spite of the fact that the area is not at all publicized. Vehicle counts have been in the 3000 to 5000 range on many summer weekends. It is apparent that continuing development and expansion of recreational sites will proceed in the future. Here, we would hope that emphasis will be placed on tenting and the non-facility-oriented recreational activities. Such activities are compatible with the Wilderness concept inasmuch as they would proceed outside the borders of the Wilderness. In the same vein of thought, upgrading and paving of the Kananaskis Highway could be compatible with designation of the Elbow-Sheep headwaters as Wilderness. The west side of the Kananaskis Valley could be developed on the basis of more intensive recreational activities, i.e., skiing, car-camping, boating, etc., while the Wilderness Area east of the Kananaskis road can be used for the more extensive activities, i.e., hiking, backpacking, cross-country skiing, and other primitive forms of recreation.

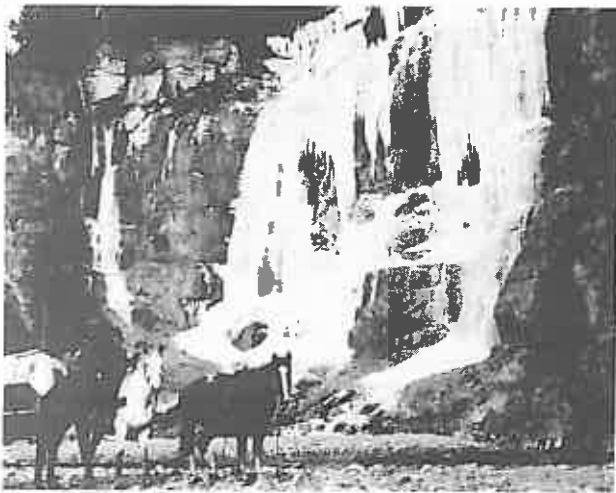
In Calgary the YMCA, YWCA, Public and Separate School Boards, Junior Forest Wardens, Canadian Youth Hostel, Boy Scouts, Girl Guides and numerous private groups all run outdoor educational programs in the primitive art of wilderness travel, programs which call for a wilderness setting. The Elbow-Sheep Wilderness can help provide for this need.

As well as the social benefits to Alberta, there will be economic benefits from the increased sales and the potential for the manufacturing of hiking, backpacking and light-weight camping equipment. The presence of a Wilderness Recreation Area a short distance from Calgary will of itself be a strong factor in the continuing growth of the tourist industry (which is our number three industry after oil and agriculture). It should be noted that nowhere else in Canada does such a unique opportunity exist for creating a Wilderness Recreation Area so close to a metropolitan centre. Even though many tourists or even Albertans may never travel within the Wilderness, the very fact that it exists will provide a feeling of freedom which cannot but help enhance the quality of our life.

There are numerous trails in the Wilderness, some of historic import, all of interest recreationally. Re-opening and maintaining of these historic Indian trails and fur-trading routes (as shown on map, Appendix B) could be handled as summer projects for students.



Designation of the Elbow-Sheep Wilderness should be considered within the context of plans for the overall utilization of our Forest Reserve lands. It is recognized that in certain areas of the Forest Reserves the industrial or commercial potential cannot be denied. In other areas, and in particular in the Elbow-Sheep headwaters, social considerations, wildland recreational demands and the wilderness potential must be the over-riding considerations.



WILDLIFE

The Elbow-Sheep Wilderness contains some of Alberta's finest mountain game country. Native species found in the area include bighorn sheep, Rocky Mountain goats, elk (or wapiti), moose, mule deer, black bear, and grizzly bear. More recently the whitetailed deer has occupied parts of this area. In addition a band of feral, or "wild" horses range over parts of the Sheep and Elbow River drainages.

A number of relatively unknown species are common to the area, including the beautiful Harlequin duck, pileated woodpecker and seldom seen furbearers, the lynx and marten.

Trapping operations in the area are on a small scale and are in the words of one trapper "more of a pastime than a business". This approach is partially voluntary and in part due to vandalism of trap lines, this vandalism being a direct result of easier access, more people, and the increasing use of over-the-snow vehicles. These factors have reduced the size of the catch and increased the cost of operation.

Despite the vast potential of this area in terms of animal production, the game harvest is low although precise counts are not available. At the same time hunting pressure especially on weekends is excessive due to excellent access and proximity of the area to the city of Calgary.

The non-consumptive use of wildlife in this area is increasing rapidly. Particularly popular is the Sheep River bighorn herd - this herd is probably the most popular with sightseers and photographers outside of the National Parks.

One need not be an optimist to suggest that given the "protection" of a wilderness boundary it is extremely likely that most, if not all game populations would quickly realize their potential. One factor has prevented this potential from being attained in recent years - a road system such that no part of the area is further away than one days walk. This factor alone is probably responsible for both the decimation of the mountain goat population throughout most of the area and the very sporadic occurrence of the grizzly bear.

Recent developments in the coal mining industry could further aggravate this situation as relatively large areas within the proposed wilderness are underlain by coal deposits. Exploration usually brings access roads, hence increased hunting



pressure. The actual act of surface mining would be even more critical, destroying valuable habitat.

Coal exploration and mining development threaten all of the major winter ranges. At the present time 88% (23 out of 26) of the identified winter ranges are affected to some extent by coal leases or exploration reservations. The effects of active coal exploration have already been felt in the Rock Creek - Three-point Creek area where new access roads to alpine meadows have resulted in a sharp increase in off-road vehicle traffic.

Two species in particular would respond to the protection afforded by a wilderness area - the bighorn sheep and the Rocky Mountain Elk.

Bighorn Sheep

A bighorn ram standing alertly in a high alpine basin symbolizes wilderness and freedom as no other sight can. The proposed Sheep-Elbow Wilderness Area has, within its boundaries, relatively large numbers of bighorn sheep ranging over some of the most spectacular country to be found in Alberta and these sheep are amongst the largest to be found in North America. The approximate distribution of bighorn sheep within the Wilderness is given in the attached map.



Despite being burdened by extreme hunting pressure, grazing by domestic stock and easier access for humans to the heart of their ranges, today's sheep populations are holding their own, an indication of the inherent high quality of these winter and summer ranges. The most marked effect of these disturbances is a change in the composition of these herds, mature males being few and far between. With intense management by Fish and Wildlife personnel and the protection of a wilderness designation, the latter problem would be remedied and these animals can continue to provide pleasure to photographers, naturalists, and hunters.

Rocky Mountain Elk

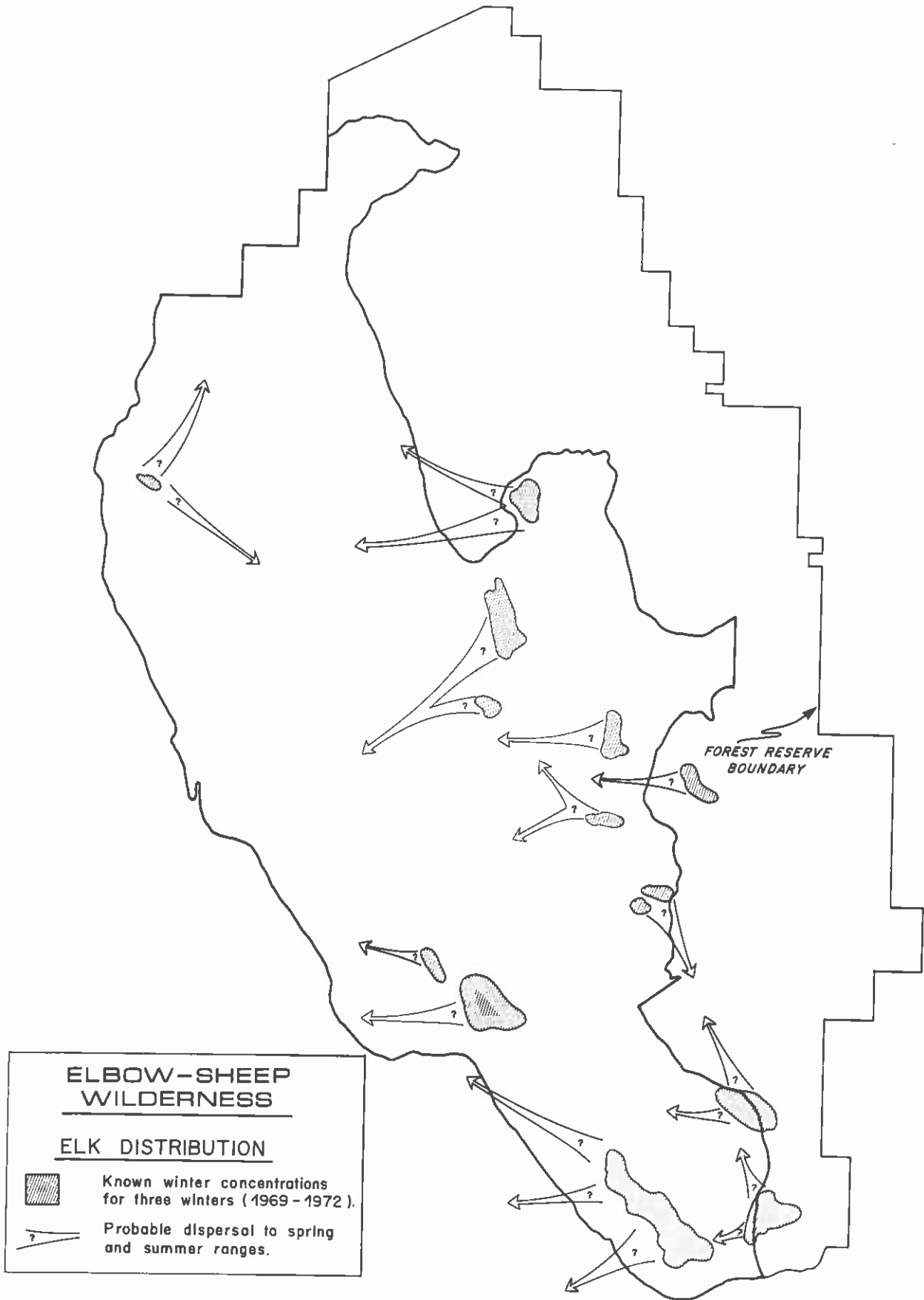
More than any other ungulate in Alberta, the elk requires large tracts of wilderness for survival. The lush meadows and extensive grasslands within the Elbow-Sheep Wilderness provide a quality pasture for the elk and in isolated spots this ungulate is doing well. However, in the past decade the overall suitability

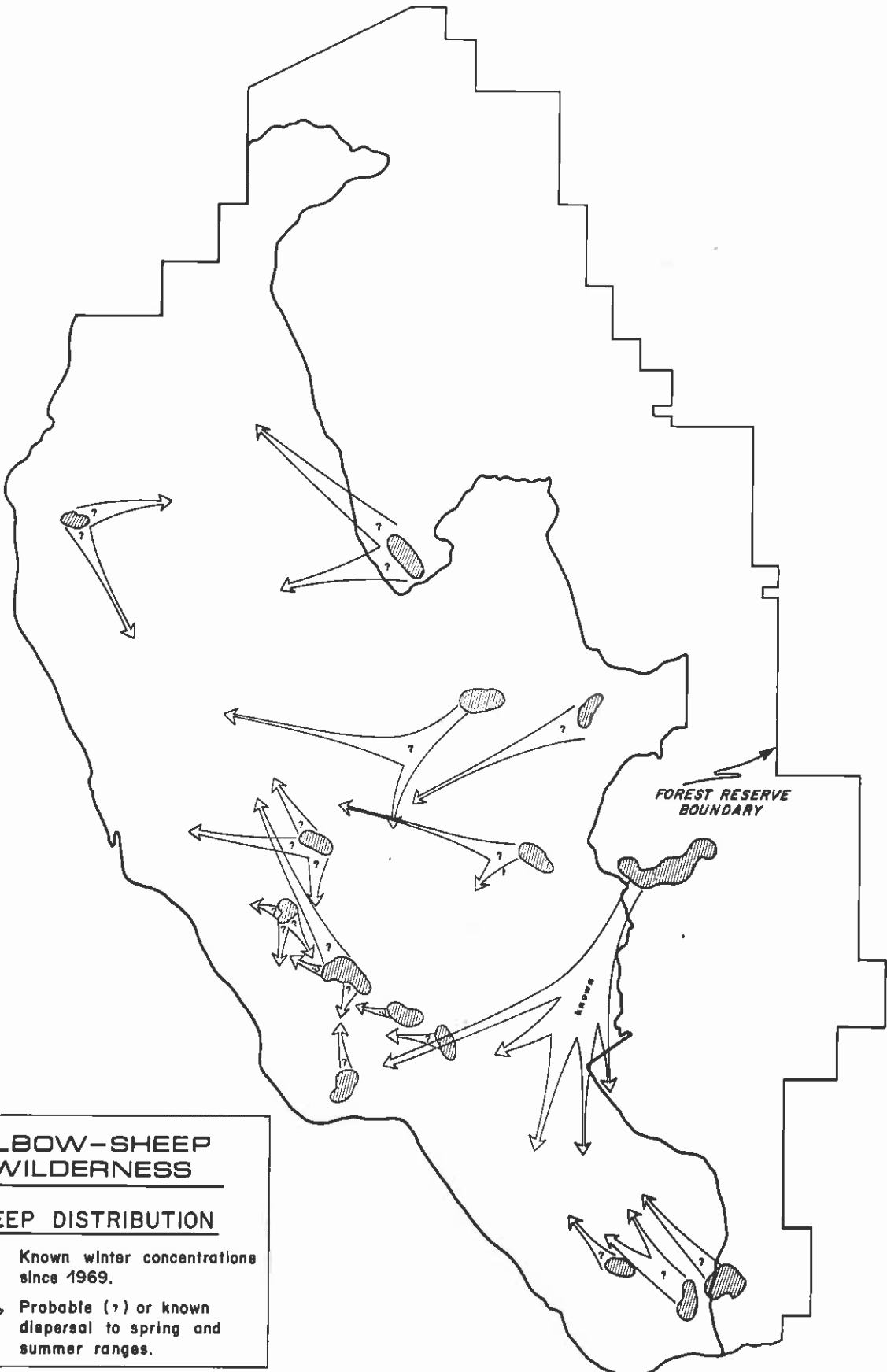
of this region for elk has declined markedly. This decline is directly attributable to easier access for motorized vehicles and, to a lesser extent, forest succession. The present range of the elk within the Wilderness is shown on the map on the following page.

Perhaps the best example of the influence humans have had on elk populations is the case of the now defunct Kananaskis Game Preserve. Although official documentation by biologists is non-existent, it is generally understood that there was a drastic reduction in elk numbers in the Kananaskis Valley after 1956 when Game Preserve status was removed.

Unfortunately very little historical information on elk distribution and numbers is available. Through the efforts of the Fish and Wildlife Branch, attempts are now being made to provide this data for present-day populations. With certain herds of elk wintering and calving within the Wilderness boundary and then moving to outlying areas, the Wilderness would act much like a reservoir. The result would probably be greater numbers of elk and more and larger antlered males.









ELBOW-SHEEP WILDERNESS

SHEEP DISTRIBUTION

 Known winter concentrations since 1969.

 Probable (?) or known dispersal to spring and summer ranges.

FLORA

The Elbow-Sheep Wilderness encompasses several mountain ranges and many high, rolling hills. Zonation of vegetation occurs on an altitudinal basis with grassland remnants, parkland and forests at lower elevations, and sweeping alpine tundra at high elevations. For the most part the area is situated in the East Slope, or Front Range of the Rocky Mountains, and is characterized by low precipitation. It is in essence a rain shadow unlike the main range of the Rockies which receives significantly higher precipitation and consequently possesses a different, but somewhat less diverse flora.



Travelling from east to west into the wilderness, one encounters an aspen-parkland vegetation in the foothills with infrequent fingers of fescue prairie extending west into a few of the valley bottoms. The high elevation foothills and lower mountain slopes support only isolated patches of mature forest consisting of white spruce, Engelmann spruce and alpine fir, numerous immature stands of the same type, and widespread forests of the fire-successional conifer species, lodgepole pine, on well-drained sites.

Perhaps the most unique and interesting vegetation type is the partially forested parkland occurring on the innermost foothills and lower mountains. It provides excellent elk and deer range and is used extensively for domestic cattle grazing. On well-drained slopes are vast open meadows dominated by pine grass, plains reed grass, wheat grass, blue grass and hairy-wild rye. Associated plants include the shrub kinnikinnick and several herbs, namely tall larkspur, yellow rattle, Indian paintbrush, common yarrow, yellow beard tongue, northern bedstraw, oxeye daisy, pussytoes, common blue bells and several vetches. Here also, on ridge crests, are the bent and twisted Douglas-fir and the picturesque wind-blown limber pine. The creek bottoms support aspen poplar, balsam poplar and willow thickets.

Major fires prior to the turn of the century, in the first two decades of the 1900's and also again in 1936 burned much of the original spruce-alpine fir forests. Today, mature stands are rare in the Sheep-Elbow wilderness. Of more frequent occurrence are younger stands of spruce and alpine fir mixed with lodgepole pine and in some instances Douglas-fir on the cool, moist, north-facing slopes. Fire-successional lodgepole pine forests are common as are vast tracts of dry, windswept slopes dotted with the charred stumps of the original spruce-fir forests.

The pine forests support an understory of reed grass, hairy wild rye, fireweed and Canada bunchberry. In early spring the pink ladyslipper brightens the

forest floor. The understory of spruce-fir forests varies greatly, depending on the successional status of a particular stand. Common shrubs include false huckleberry, white-flowered rhododendron, bearberry, two species of juniper, grouseberry, blueberry, white meadowsweet, huckleberry, raspberry, buffaloberry, Labrador tea, mountain cranberry and prickly rose. Herbs are abundant in younger stands, the more prominent ones being Canada bunchberry, twinflower, evergreen violet, star-flowered Solomon's seal, heart-leaved arnica, bronze bells, lousewort, buttercup, and several native orchids.



At timberline the continuous forest breaks up into islands of alpine fir and Engelmann spruce, interspersed by lush sub-alpine meadows. A common tree at timberline in the Elbow-Sheep Wilderness is alpine larch, a deciduous conifer which sheds its needles each autumn.

The bright, golden-yellow colour of alpine larch needles in autumn is not common in all mountain regions of Alberta as this species is restricted to the southern portion of the Rockies. A fourth timberline tree species is the graceful whitebark pine, which although not a common timberline species throughout the Rockies, is abundant on drier slopes in this area. Timberline meadows are colourful throughout the short growing season, beginning in early spring with the glistening, yellow masses of glacier lily, the bold, white globe flower and the western anemone. Later in the summer these meadows become a mass of flowers dominated by yellow columbine, white camas, Nodding onion, Indian paintbrushes, meadow rue, alumroot, purple fleabane, fireweed and bluebell.



Above treeline are numerous rolling alpine meadows, plateaus and spectacular alpine passes. The remote and beautiful alpine region is a mosaic

of plant communities resulting from the diverse topography and uneven distribution of snow. Communities of white mountain avens and dwarf-willow are spectacular in early spring as a multitude of alpine-flowers begin the growing season. The list of common flowers includes white mountain avens, alpine forget-me-not, Lyall's iron plant, golden fleabane, sweet-flowered androsace, alpine cinquefoil, purple saxifrage, moss campion and alpine arnica. Next to bloom are the heather communities dominated by purple, white and yellow mountain heathers. The golden sedge communities (a favourite forage of Rocky Mountain bighorn sheep and mountain goats) contribute to a colourful autumn along with the bright red leaves of many alpine flowers and the yellow bands of alpine larch. In the early fall many of the mountain meadows take on a brilliant flame red appearance when the bearberry plant is changing to its autumn colouring. This is possibly most spectacular when viewed in the early morning or late afternoon on some of the tributary valleys of the Sheep and Elbow rivers, such as on upper Shoulder Creek.

References on the flora and wildflowers native to the area are included in the Appendix.

FISHERY

The fish species found in the Elbow-Sheep Wilderness include cutthroat, dolly varden, rainbow, eastern brook trout and rocky mountain whitefish. The areas most heavily fished on the Jumping Pound, Elbow and Sheep Rivers are stocked regularly and fall outside the Wilderness area. The cutthroat, dolly varden and rocky mountain whitefish are native to the Bow River watershed.

The Palliser expeditions more than 100 years ago made reference to the fine fishing in the Highwood River which touches on the southern flank of the Elbow-Sheep Wilderness. The original excellent fishing conditions in the Kananaskis Lakes and Kananaskis River bordering the Wilderness area on the west have all but been destroyed by hydroelectric power installations. This once productive watershed at one time contributed significantly to the food supply of the Stony Indians.

The cutthroat trout found in the Picklejar Lakes are believed to be native to these lakes. Elbow Lake has been stocked with cutthroat trout. Several of the other alpine lakes in the Elbow-Sheep Wilderness possibly could support a trout fishery but have not been stocked. Ware Creek flowing into the north fork of the Sheep River and both Sullivan and Flat Creek flowing into the Highwood River are important spawning areas for the Bow River rainbows.

At the present time most streams in the Wilderness area are classified as poor in terms of trout productivity. This is attributable to a number of reasons including water level fluctuations, insufficient pools, sparse bottom fauna, constant scouring and shifting of the river channels, absence of streamside vegetation and a lack of variation in streambed composition. Also one must recognize that some stream damage has occurred from road and seismic line incursions. Nevertheless the potential fishery is rated as excellent to outstanding subject to instituting and carrying out stream improvement and rehabilitation projects. Experimental work and research studies re native and introduced fish species have been conducted at Gorge Creek for a number of years.

In terms of a recreational type of Wilderness, fishing is an activity which should be encouraged. It is an excellent use of a renewable resource, is non-polluting, non-facility oriented and yet is sufficiently inexpensive as to be within the budget of most Albertans. The thrill of a strike on the line or the pleasure of fresh trout cooked over an open fire can provide an added dimension to an exhilarating day of hiking.

The Elbow-Sheep Wilderness contains numerous peaks (see map on following page), most of which offer a moderate challenge to the skilled rock climber. The climbs are easy to moderately difficult, but perhaps the main attraction is the beauty of the country - especially in the autumn.

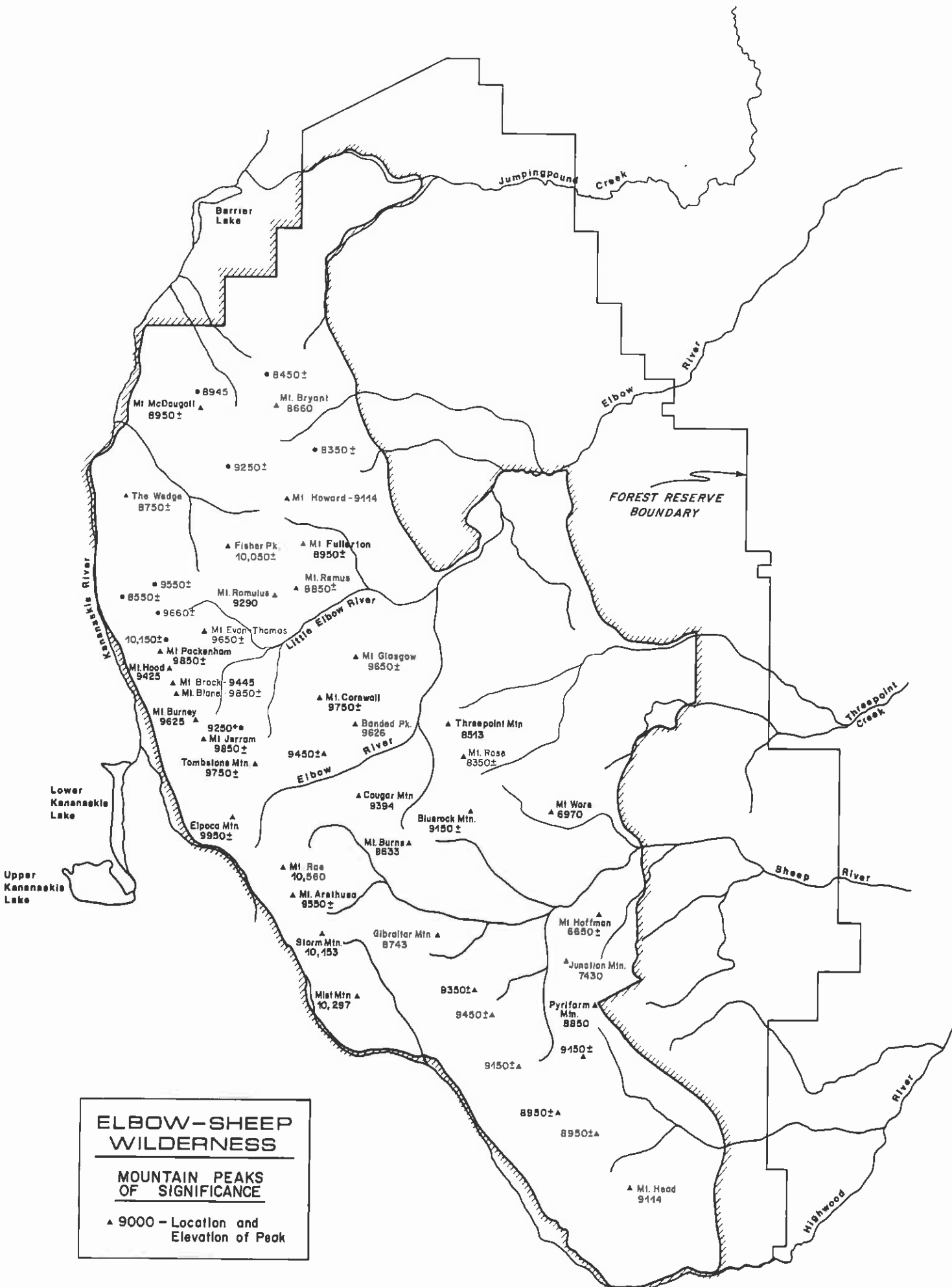
Many of the peaks in the Highwood Range were first climbed by local ranchers and R.M. Patterson in the book entitled "The Buffalo Head" gives some details of these first ascents.

Among the peaks of major interest to climbers are Mt. Arethusa (9,550') in the Storm Creek-Pocaterra Creek area; Mt. Burns (9,633') between the Sheep and Elbow Rivers; Cougar Mtn. (9,394') between the heads of the Elbow and Sheep Rivers; Mist Mtn. (10,297') above the junction of Mist Creek and Storm Creek; Mt. Rae (10,560') two miles northeast of Highwood Pass and Storm Mtn. (10,153') between the heads of Storm Creek and Sheep River.

First ascents on the peaks above 10,000' were made in 1946 by the three Blayney brothers and D. King (Mist Mtn.), sometime prior to 1950 for Mt. Rae (a cairn without record was found on the summit in 1950 by G. Langille and E.J.H. Smyth) and in 1950 (Storm Mtn.) by Langille and Smyth.

Other peaks of interest to climbers in the Opal, Fisher, and Highwood Ranges are Tombstone Mtn. (9,900'), Elpoca Mtn. (9,950'), Mt. Jerram (9,800'), Mt. Burney (9,625'), Mt. Pakenham (9,800') and Mt. Evans-Thomas (9,800') in the Opal Range. East of the Opal Range lie Banded Peak (9,626'), Mt. Glasgow (9,680') and Mt. Cornwall (9,700'); within the Fisher Range are Mt. Romulus (9,290'), Fisher Peak (10,015'), Mt. Howard (9,114') and Mt. McDougall (8,400'); and within the Highwood Range lies Mt. Head (9,114'). In total there are a variety of wilderness peaks with appeal for the novice as well as the experienced alpinist.





ELBOW-SHEEP WILDERNESS

MOUNTAIN PEAKS OF SIGNIFICANCE

▲ 9000 - Location and Elevation of Peak

GREAT DIVIDE TRAIL

The concept of a Great Divide Trail north through Canada along the Rockies originally proposed by the Girl Guides of Canada, was formalized several years ago by Jim Thorsell of the National and Provincial Parks Association. This trail would begin at Waterton Lakes National Park on the U.S. Border and continue north along the Continental Divide to Mt. Robson. As such, it



would extend the long and scenic Rocky Mountain Trail which runs throughout the U.S. from Mexico to Canada. Planning is already underway and the National Parks Branch is in the process of finalizing the routing within Kootenay, Yoho, Banff and Jasper National Parks.

However, between Banff and Waterton National Parks the siting location of the Trail is complicated by present and future land uses within the Forest Reserves of Alberta and British Columbia. For example, the Forestry Trunk Road of Alberta on the East and the Elk Valley Coal Development in B.C. on the West eliminate two logical routes for portions of this wilderness trail. Valley routes further west than the Elk Valley of B.C. are complicated by present and future timber cutting, and high routes in B.C. remain impassable until late in the summer. Thus, if the trail is to be located out of sight and sound of commercial and tourist motor traffic, the most likely routing for a major portion of its non-Park length is through the Elbow-Sheep Wilderness.

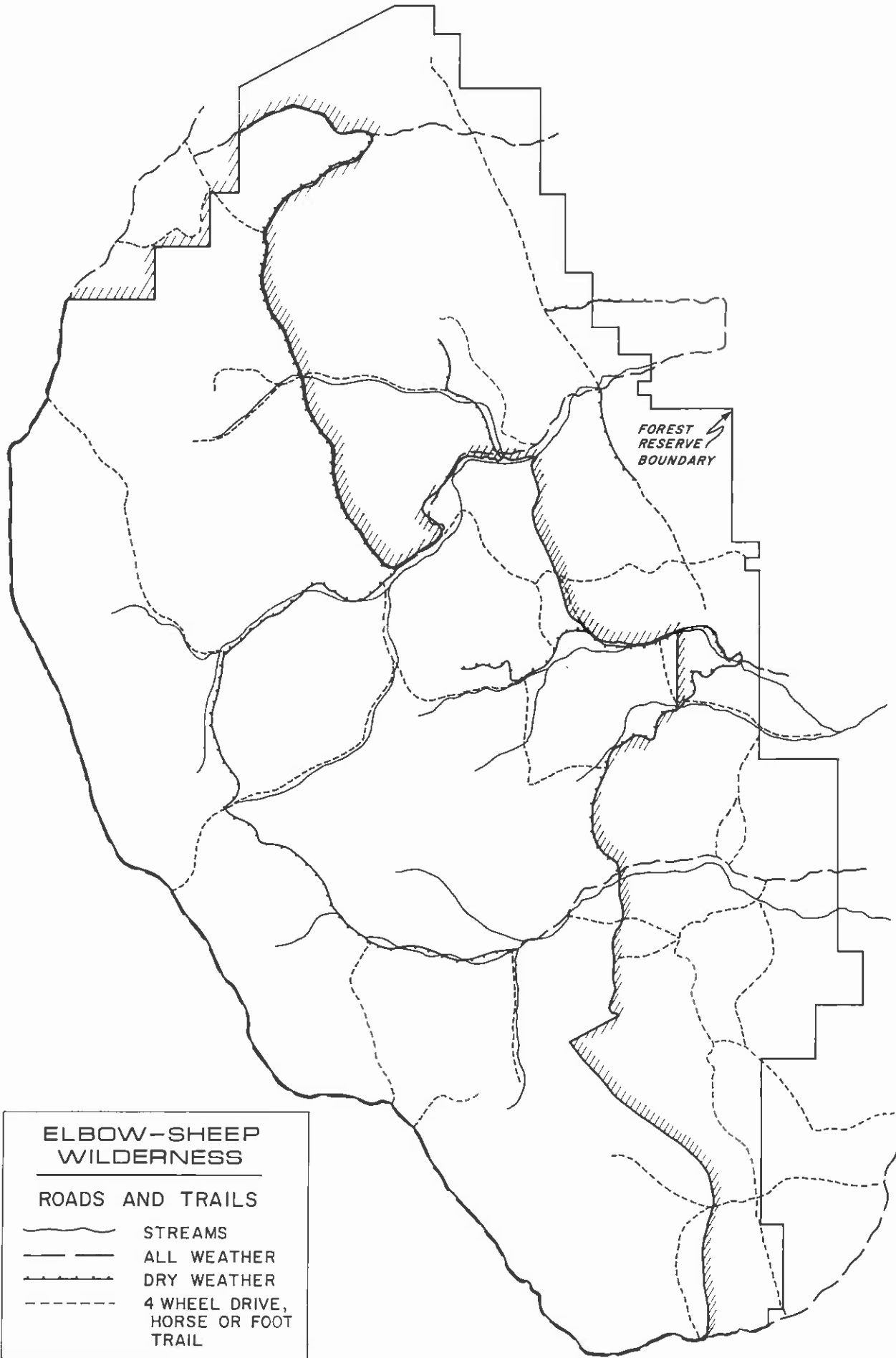
On the assumption that the trail will enter Alberta at North Kananaskis Pass, proceed southward to Upper Kananaskis Lake, thence south of the Lake to the Forestry Trunk Road along the 6500' contour, and that the parallelling of roads frequented by motor vehicles is most undesirable, then it would be logical to enter the Elbow-Sheep Wilderness via Elbow Lake on or near what is now an infrequently used truck trail. Routing along truck trails within a portion of the Elbow-Sheep Wilderness will be necessary, but since motorized traffic will not be allowed, and these trails will revert to foot or horsepaths (in time without maintenance), this is probably acceptable. In any event, there appears to be little alternative.

Once inside the Wilderness, a "core" trail can be located which will provide a number of lateral trails that can be used as alternate routes. This might include a loop northward to the east of the Opal Range to connect with the Evans-Thomas Trail, or the trail could swing southward to connect with the Little Elbow. The core trail

could then proceed southward down the Sheep River to Junction Creek. An alternate loop might branch into Mist Creek and from there to Upper Junction Creek via Picklejar Lakes. From Upper Junction Creek the core trail would continue over Pyriform Pass, along upper Trap Creek, then due south to connect with the junction of Cataract Creek and the Highwood River.

The core trail, and most of its alternate loop routes traverse valleys and passes where remnants of the old Indian, trapper and early pioneer trails are still visible, and even useable. Whenever possible, these old routes should be rehabilitated. They are of historic importance, aesthetically pleasing, and often very practical routes. Here, we should note that the new program of Historic Trails, Wild Rivers, and Scenic Areas announced in October, 1972 by the Department of Indian Affairs and Northern Development could prove extremely valuable in assisting the location and rehabilitation of trails within the Elbow-Sheep Wilderness.

Routing south of the Elbow-Sheep Wilderness could proceed up Cataract Creek, a level stream which has been proposed for "Wild River Status" by a number of Alberta groups. From the headwaters of Cataract Creek south to the Crowsnest Pass there are outfitter trails that lie just to the east of the Continental Divide. These could provide a scenic, yet wild route for the hiker and horseman. The Alberta Wilderness Association is currently studying means by which protection may be given to this narrow band of wildlands just east of the Divide. This protection must be forthcoming soon, or all chance of locating this segment of the Great Divide Trail in a wilderness environs will be lost.



The Eastern Rockies Forest Conservation Board was established in 1947 by the Provincial and Federal Governments to administer the Forest Reserve. The primary objective has been water conservation, although the Board has operated under a multiple-use philosophy while at the same time attempting to minimize the adverse effects of any one type of development. 1972 marks the last year of the existence of this Board.

The river headwater areas have an annual rainfall of from 45 to 60". More than half of the total precipitation falls as snow. Allowing for evaporation and transpiration losses from vegetation, the net runoff is in the order of 40 to 60 percent. Approximately 87 percent of the total annual flow in the Saskatchewan River system originates in the foothills and mountain headwater areas. Much of the deep snowpack in the subalpine and alpine zones remains late into the summer and thereby contributes to a more uniform type of runoff than would otherwise occur.

The Elbow and Bow Rivers supply the city of Calgary with all of its water supply. Thus, both water quality and quantity are of extreme importance. Downstream uses on the Bow River system include the supplying of water to the Western and Eastern Irrigation Districts.

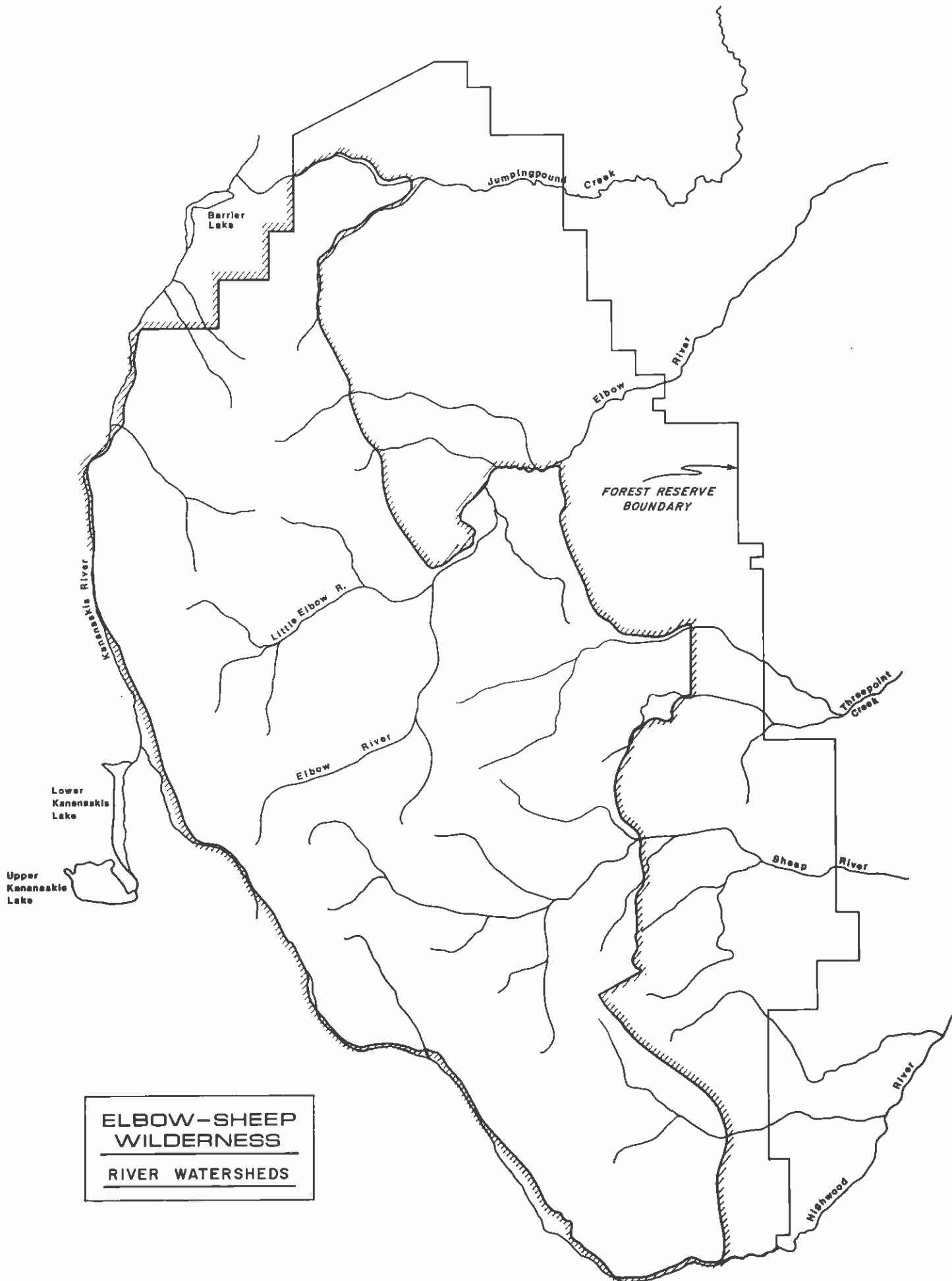




Forests and ground vegetation provide a natural flow regulator and this is especially true in areas of more severe topography. For this reason large areas within the Forest Reserve have been classified as protection forest. Almost 180 square miles of forested land within the Elbow-Sheep Wilderness have been so classified.

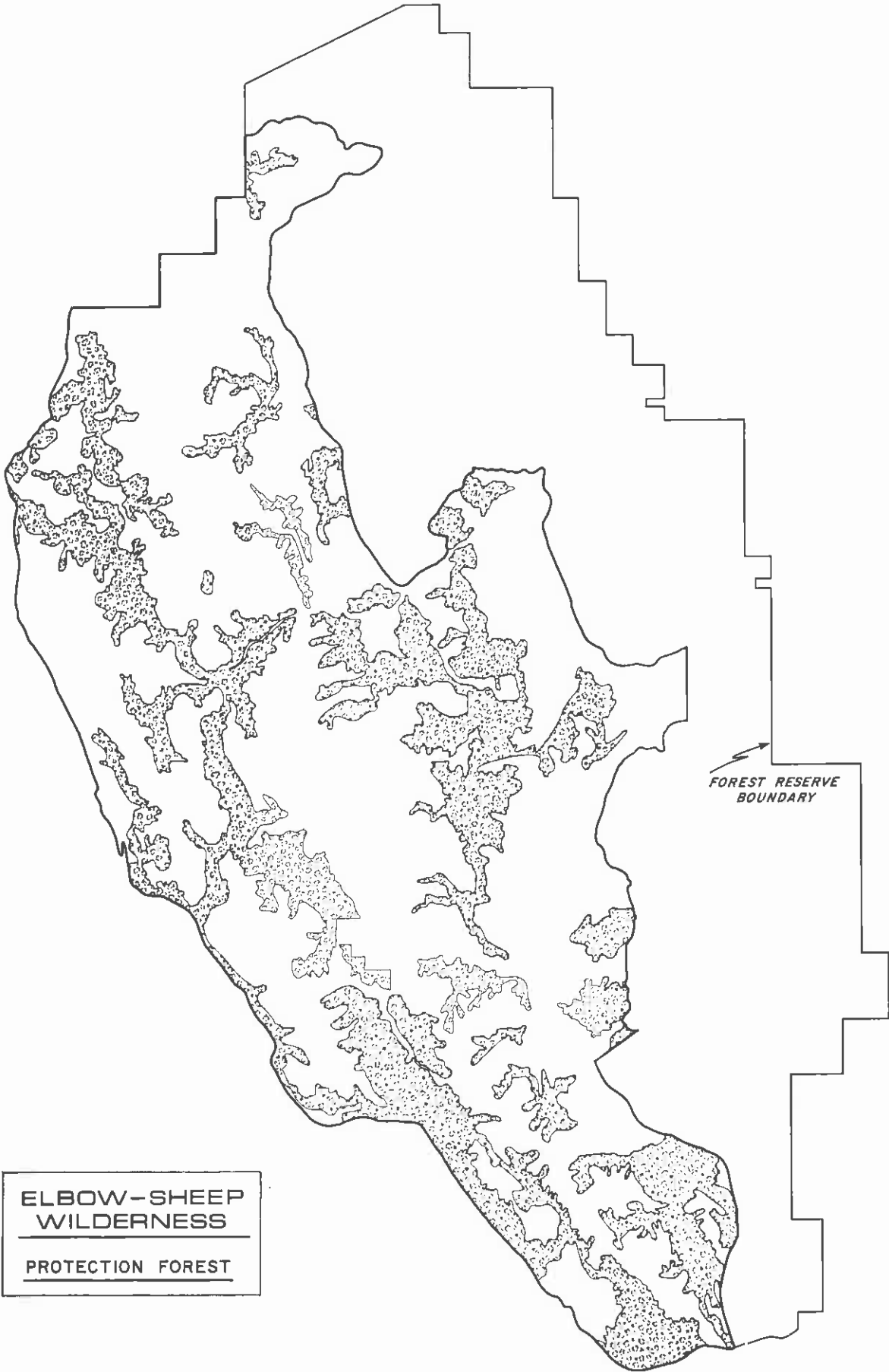
The biggest problem in maintaining the quality of the water on the mountain watersheds is with erosion whereby soil and related material are washed into the streams and carried as suspended sediments. In this regard the major problem to date has been as a result of road and access trail construction for use by mechanized vehicles. Mining activities could present a major problem if such developments are allowed in critical watershed protection areas, and even when allowed in less critical areas if adequate precautions are not observed.

Designation of the Elbow-Sheep headwaters as a Wilderness Area is compatible with the principles of watershed management and is the type of use which can best guarantee undiminished conditions with regard to water quality, quantity and flow regulation.



**ELBOW-SHEEP
WILDERNESS**

RIVER WATERSHEDS



ELBOW-SHEEP
WILDERNESS

PROTECTION FOREST

FOREST RESERVE
BOUNDARY

GRAZING BY DOMESTIC STOCK

Grazing by cattle in those areas of the Sheep, Elbow and Highwood River Drainage, now included in the Bow River Forest, probably started in the 1880's when people like the legendary John Ware settled in the Foothills. To what extent this grazing replaced use by bison is a matter of pure conjecture, however skeletal remains indicate that bison did use the upper reaches of these drainages, perhaps as late as the 1870's. With the Forest Reserve Act of 1910 grazing was prohibited. However as a result of strong opposition to this policy by local ranchers, grazing was again allowed in 1914 and has continued since that time. By 1919 grazing reached an all time high. However, by the early 1920's it was apparent that some areas were suffering from serious overgrazing.

The earliest official records of grazing of cattle in the Forest Reserve were initiated by the Eastern Rockies Forest Conservation Board at the time of its formation in 1947. Official records have been maintained since 1947 in the North Sheep area. However, tabulations in other regions were not commenced until as late as 1954. Shortly after being established, the Eastern Rockies Forest Conservation Board began a relatively systematic but superficial range survey of areas in the Elbow-Sheep Headwaters and in the early 1950's, records where available, indicate rather significant decreases in the numbers of animals being grazed.

Since that time actual use within these drainages has continued to decline and recently several major steps have been effected which have further reduced grazing by cattle. These changes were instituted by the Alberta Forest Service, now completely responsible for grazing administration.

The most notable of these steps was the decision to curtail grazing in the upper Sheep River Valley, a delicate high elevation area severely over-utilized before the 1972 ban. This area is entirely within the Elbow-Sheep Wilderness. The upper Kananaskis valley has always been closed to cattle grazing.

The Forest Reserve is divided into grazing allotments for administrative purposes as shown on the accompanying map. In 1971 those allotments (Highwood, Sullivan-Flat, south Sheep, North Sheep, Elbow and Jumping Pound) which would fall within the Wilderness supported 1240 yearlings, 2863 mature cows, and 89 bulls for a period of about 4 months. Actual use was roughly 13,983 Animal Unit Months (A.U.M.'s) for which stock owners paid \$11,885 or \$0.85 per A.U.M.

Roughly 60% of the surface area of these allotments would be included in the wilderness, however a critical look at the distribution of the forage resource in these allotments shows that the most productive lands lie on the eastern fringe of the Forest Reserve at the lower elevations and that much of this area lies outside the boundary of the Wilderness. In 1971 only 26% of the actual use (measured in A.U.M.'s) occurred on lands that would fall within the wilderness. This varied, roughly, from 7% in the Sullivan-Flat Creek Allotment to 12% in the major South Sheep Allotment, to 47% in the Highwood Allotment.

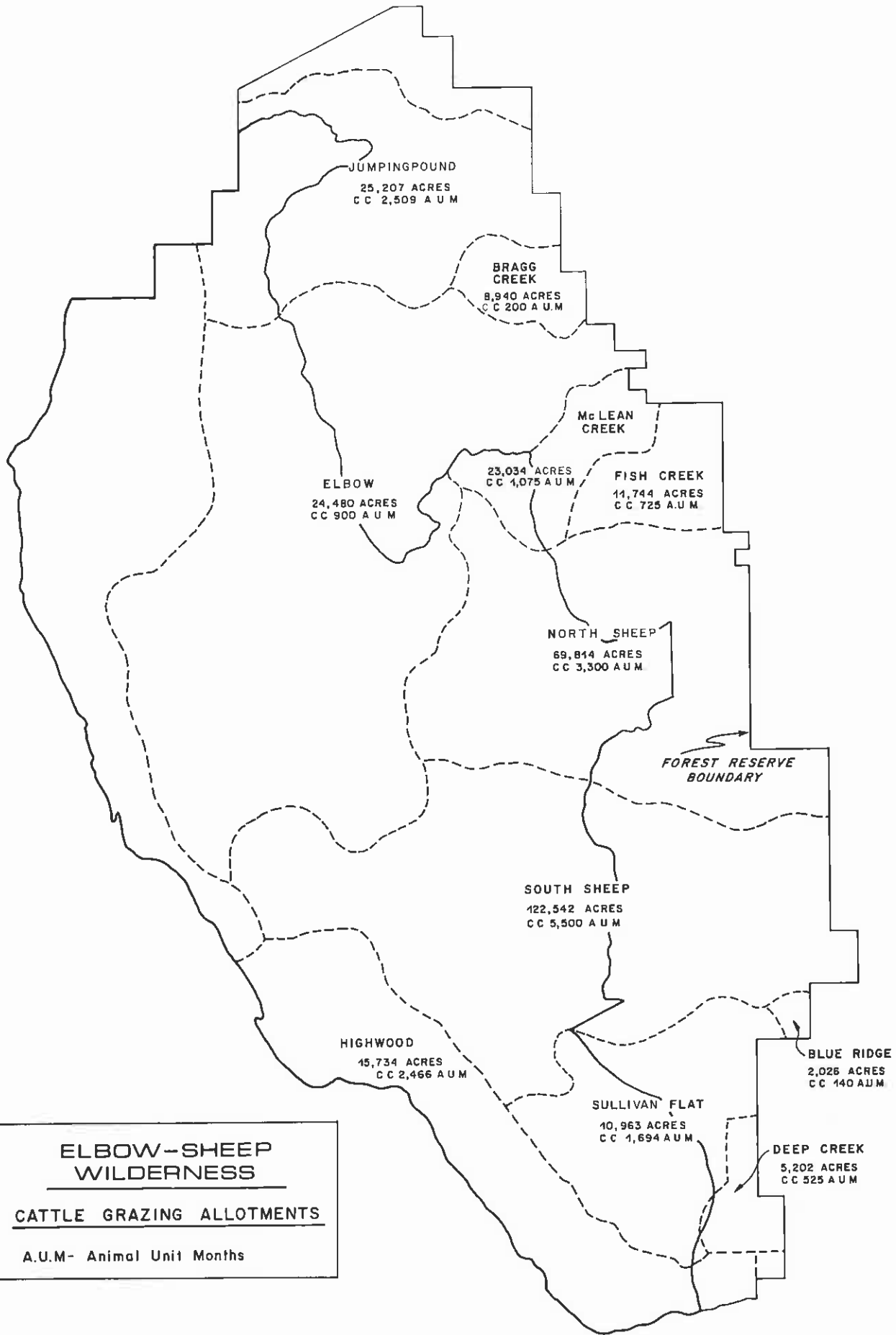
The limited amount of grazing that takes place on lands that lie within the Wilderness would not constitute a major problem provided intensive management was

practised, primarily with respect to achieving proper distribution with the allotments. It is possible as well that a more equitable balance between considerations given to wildlife and those given to domestic stock will, simply through greater knowledge, be forthcoming and would, in any event, reduce stocking rates in these areas.

The economic value of grazing privileges is a subject that remains to be clarified. Very few facts are available and the economic status of the permittees is rarely known. Many own land sufficient to support their stock yearlong and, on occasion, permittees have not used their permit. On the other hand several "borderline operations" exist only because they have permits to graze cattle in the Reserve. An in depth evaluation of the various operations would quickly establish an order of priority.

At the present time the Alberta Wilderness Association sees limited grazing under strict regulation to be a compatible use of the Wilderness if all operations are carried out by horse within the Wilderness boundaries. It recognizes the historic and traditional use of this area for grazing, and believes that under proper control such use can continue without detriment to the area itself, or to the recreational use of the area.

Names and addresses of Stock Association officials are included in the Appendix.



**ELBOW-SHEEP
WILDERNESS**

CATTLE GRAZING ALLOTMENTS

A.U.M- Animal Unit Months

COAL RESOURCES

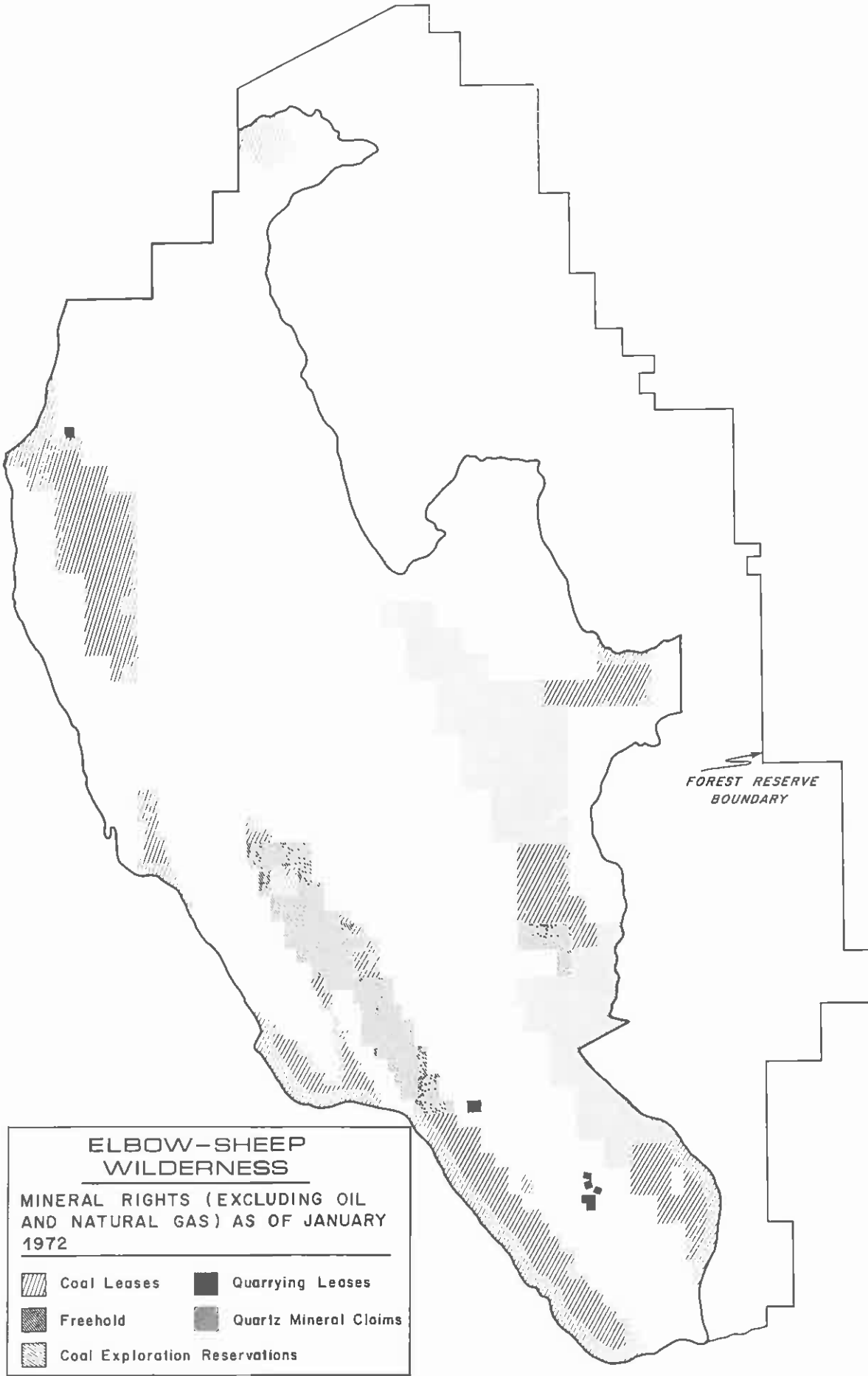
Approximately 100 square miles have been leased for coal exploration purposes. At a lease rental of \$1.00 per acre per year this results in a net revenue of about \$70,000 per year. A map showing coal leases and a list of companies holding such leases is included in the Appendix. To a large extent the exploration work has consisted of geological mapping. In some cases trenching has been carried out and at least one of the properties has seen some rotary drilling.

There are many other areas in the province where the prospects for coal mining are much greater than is the case in the Elbow-Sheep Wilderness. Factors adverse to coal development include (1) distance to connecting transportation facilities, (2) location of coal deposits in high altitudes or on slopes which are prime sheep and elk grazing range, (3) rough topography and steeply inclined terrain where land restoration activities would be extremely costly and (4) location of leases in the Protection Forest areas where watershed protection is the primary consideration. No approvals have been granted for coal extraction and considering the present sensitivity of the general public to strip mining activities and since this area is only a few miles from Calgary it is doubtful that approvals will be granted.

Two of the largest lease holders have been very active in other areas of the province. To some extent their activities within the Wilderness possibly are related to maintaining a competitive and strong negotiating position re development approvals on at least some of their other holdings. Should these leases be revoked within the Wilderness, adequate compensation would have to be provided to offset exploration expenditure where companies can demonstrate that their properties are otherwise economically viable. The major expenditures to date, however, would appear to be lease rentals. Consequently, another alternative would be to grant companies leasing rights in other areas of the Province.

Given the high recreational, wildlife, and watershed values of the Elbow-Sheep Wilderness, it is strongly recommended that as a first step no new leases be issued to companies not presently holding leases and that no leases be granted on lands which have not previously been leased or on lands on which the leases have not been renewed by the original lease holder. It is also recommended that leases be non-transferable.

A list of companies holding leases within the Wilderness is given in Appendix A.



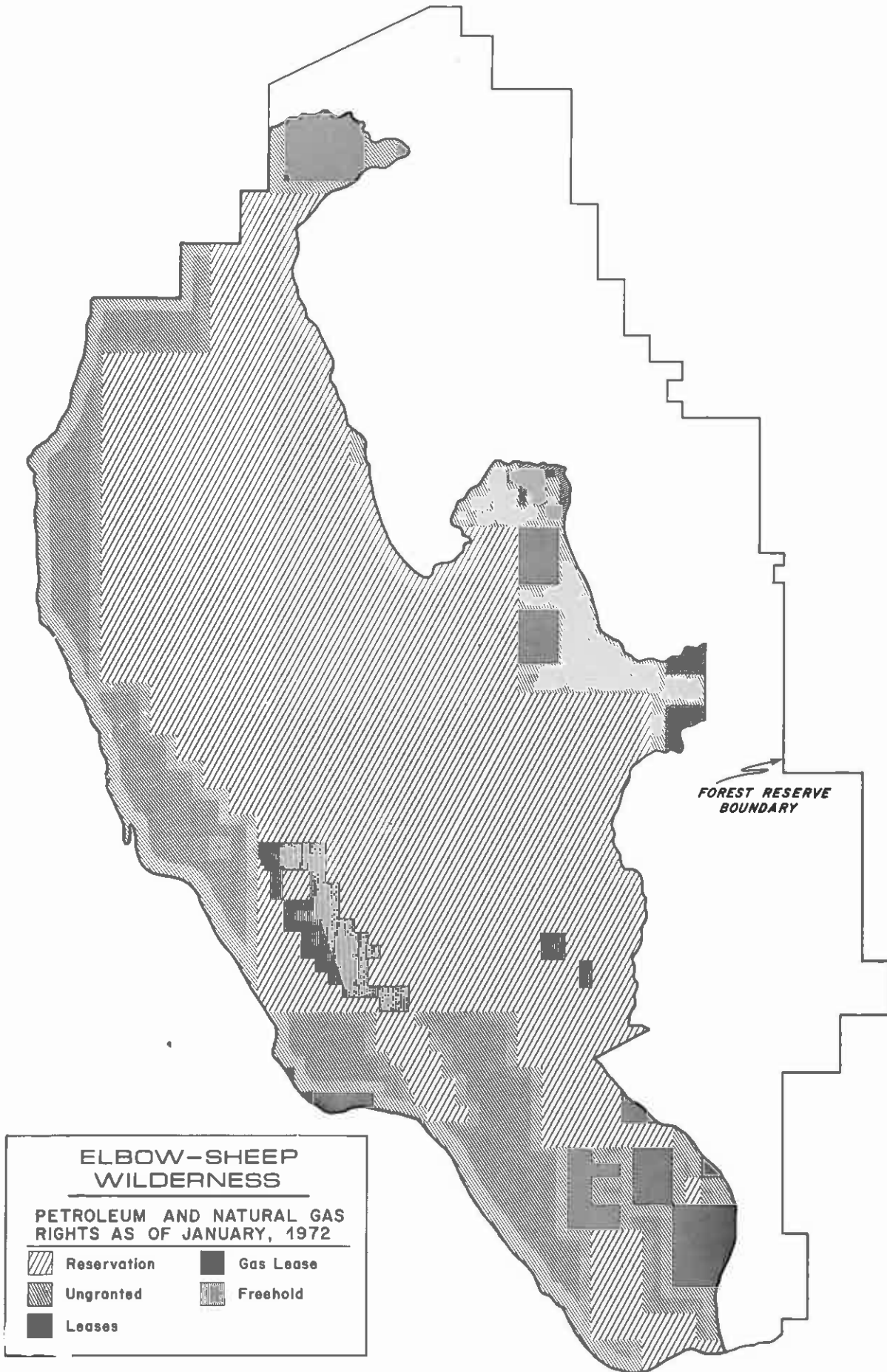
PETROLEUM AND NATURAL GAS RESOURCES

Geological features such as the Moose Dome when occurring at depth can be of considerable interest to the oil exploration companies as the structures could contain gas and/or oil. To date only one deep exploratory test has been drilled within the boundaries of the Wilderness Area and the well (11-15-20-7W5M) was abandoned in 1959 at a depth of 10,316 feet without encountering commercial shows of gas or oil. The complex geological structure and the extremely high drilling costs, in the order of \$1,000,000 per well, have contributed to the generally low level of oil company activities in this area.

To a large extent, as shown on the Petroleum and Natural Gas Leases map, rights have been retained by the crown or only exploration reservations have been issued. An exploration reservation commits the operator to the expenditure of funds either for seismic or exploratory drilling purposes. If the commitment is not met within a specified period of time the mineral rights revert to the Crown. In some cases reservations were originally obtained for as little as a few cents per acre.

After completing exploratory drilling programs, operators are entitled to select petroleum and natural gas leases on a portion of the original reservation. Alternately petroleum and natural gas leases may be purchased during lease sales. Generally these lands represent a large expenditure on the part of the oil companies. Along the eastern boundaries of the Wilderness petroleum and natural gas leases have been obtained by a number of operators. A listing of companies holding exploration or drilling leases within the Wilderness is given in Appendix A.

Considering the fact that oil and gas operations result in a depletion of resources over a relatively short period of time and that most drilling operations can be completed in 3 to 6 months it is felt that under a system of carefully controlled development the long-term wilderness potential of the area need not be severely or adversely affected by drilling along the eastern boundary. It is quite possible that much of the land now covered by the drilling reservations will revert to the crown after a specified period of time. As well, where operators have not as yet committed themselves to major expenditures, the land possibly could be recovered by the provincial government. In cases where drilling is to proceed the main concern is one of road incursions in areas that are currently roadless. Obviously the case for oil and gas development within, or along the borders of the wilderness is a matter requiring careful consideration. However, of itself, such development need not and must not destroy the wildland aspects of the area.



TIMBER RESOURCES

Timber resources within the Elbow-Sheep Wilderness are not extensive. Commercial species include aspen, balsam poplar, lodgepole pine and both white and Engelmann spruce. Although the market for aspen and poplar is currently very limited, the two conifer species are cut for saw timber, poles, and posts. Douglas-fir, although present in the area, does not exist in large quantities and is not an important timber resource. Alpine larch is also present in limited amounts as is alpine fir and limber and whitebark pine, but these species occur primarily in high elevation "Protection Forests" and cannot be considered as a commercial source of wood.

The proposed wilderness totals 560 square miles, of which 240 square miles does not now, and possibly never will support a timber resource. One hundred and eighty square miles comprises "Protection Forest" which is unavailable for commercial harvest. Of the remaining 140 square miles, one square mile of conifers are currently large enough to be harvested commercially. Mixed stands of immature deciduous and coniferous trees account for 10 square miles and 129 square miles consists of immature mixed pine and spruce growth.

While essentially no timber harvesting will be carried out within the proposed wilderness in the near future, approximately 60 percent of the 140 square miles in various management units has been allocated in the form of "quotas" by the Alberta Forest Service to four companies. These management units, the approximate number of square miles of timber stands within and outside the proposed wilderness for each management unit, and the annual cut in cubic feet allotted each company are given in the Appendix. Outside the Wilderness (north of Twp 15 and south of the Bow River) there are approximately 400 square miles of timbered land of which about 10 percent is mature growth. Approximately 133.5 of the 400 square miles have not been allocated.

Allocations of quotas and annual cuts within a management unit have been made by the Alberta Forest Service on the basis of sustained yield forestry, that is, the annual cut is calculated in such a way that continued timber production is assured, assuming good regeneration of harvested areas, normal growth of the new stand, and no large scale catastrophe such as fire, or insect or disease epidemic. Inclusion of the 140 square miles of timber resource under statutory protection as a Wilderness possibly would affect the Forest Service's timber management program for the Bow River Forest Reserve. (The 1965 "Atlas of Alberta" shows the actual timber harvest for southern Alberta to be appreciably lower than the existing sustained yield harvest.) The extent and degree to which removal of the resource from commercial exploitation would affect the local economy cannot be ascertained at the present time since the Alberta Forest Service was unable to provide volumes, age classes, and estimated annual growth figures. These data will of course be necessary if, in the future, costs and benefits of timber production are to be compared with costs and benefits of wilderness recreation.

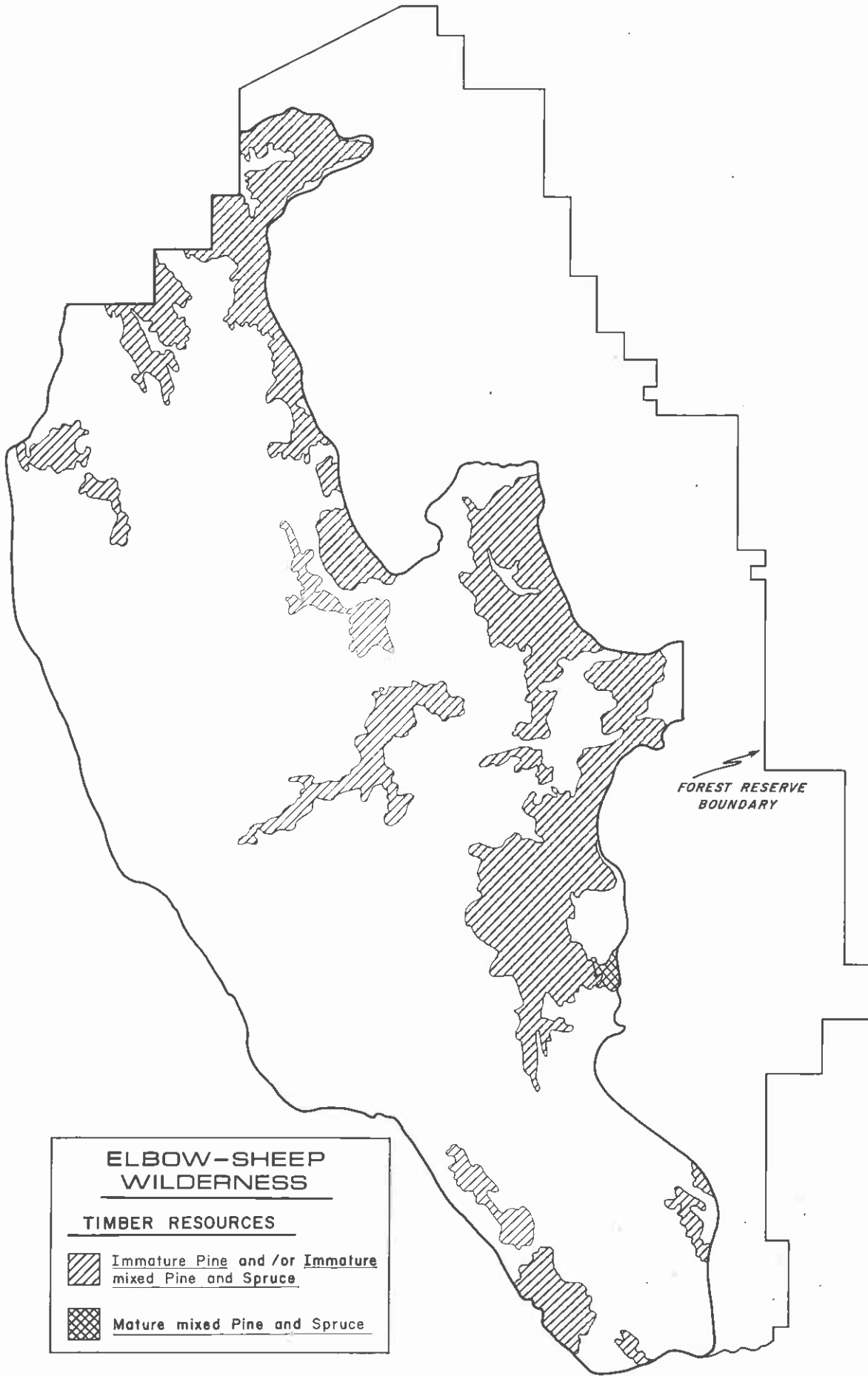
It should be noted that as a result of apparent slow growth rates and past forest fires the area has never been a noted source of good merchantable timber. Inasmuch as most of the timbered areas within the Wilderness will probably not be

able to support a timber operation within the next ten years the value of the resource in terms of present value dollars must be appreciably discounted.

In response to a request for comments the Alberta Forest Service has suggested revised boundaries for the Wilderness. These revised boundaries are based on a timber management point of view and do not give consideration to other resource values, i.e., wilderness and recreational activities. The revisions would have the effect of segmenting the Wilderness and would reduce the size of the Wilderness by some 238 square miles leaving only the high elevation non-productive (timber) portions as wilderness. If this same approach were taken with regard to the other exploitive types of development prevalent in Alberta, then virtually none of our remaining Crown lands could qualify for wilderness status.


Consideration must be given to the "trading" of immature growing stock in the proposed Wilderness for equivalent volumes within unallocated management units elsewhere in the Bow River Forest. Barring this, a thorough analysis must be made of the exact number of jobs which would be lost by the local timber industry through "locking up" 129 square miles of immature timber. This "cost" should then be compared to benefits which might accrue to local residents (i.e., increased outfitting, guiding, etc.) and other social and real benefits accruing to all Albertans from inclusion of the immature timber within the Wilderness.


Finally, a wilderness area, and especially an area destined for heavy wilderness recreational use, must contain a balance of ecological vegetation zones. An alternative that results in removal of most of the timbered valleys from wilderness classification, and in the process fragments the basic integrity of the area as a whole, is not a sound alternative.



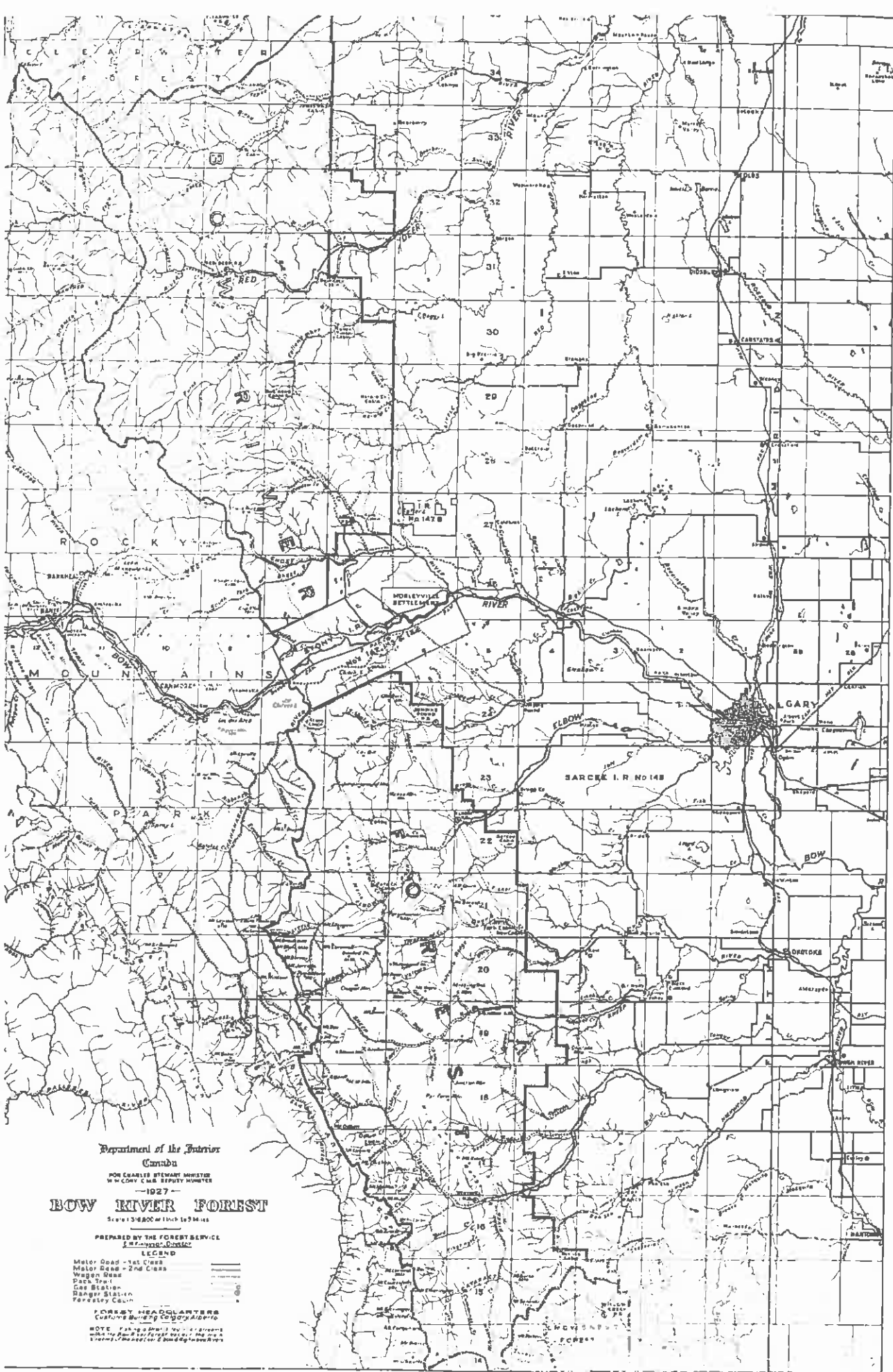
**ELBOW-SHEEP
WILDERNESS**

TIMBER RESOURCES

 Immature Pine and/or Immature mixed Pine and Spruce

 Mature mixed Pine and Spruce

FOREST RESERVE
BOUNDARY



Department of the Interior
 Canada
 HON CHARLES STEWART MINISTER
 W. CONY C.M.B. DEPUTY MINISTER
 —1927—

BOW RIVER FOREST

Scale 3:80000 to 1
 PREPARED BY THE FOREST SERVICE
 Forestry Centre

- LEGEND**
- Motor Road - 1st Class
 - Motor Road - 2nd Class
 - Wagon Road
 - Path Trail
 - Gas Station
 - Danger Station
 - Forestry Cabin
- FOREST HEADQUARTERS**
 Calgary Forestry Centre Alberta
- NOTE:** This map is a reproduction of the original map of the Bow River Forest, Alberta, Canada, and is not to be used for any other purpose.

i. TIMBER PERMIT HOLDERS

Management Unit	Quota Holder	Annual Cut (cu. ft.)	Area of timber to be withdrawn from unit for Wilderness use (square miles)			Remaining area of timber outside of Wilderness (square miles)		
			Mature coniferous	Immature coniferous	Immature mixed	Mature coniferous	Immature coniferous	Immature mixed
B1-Q2	Fullerton Post & Pole Company	134,900	0	0	0	0	9	3.5
B1-Q3	Kendall, W.B.	106,000	0	0	0	0	11	4.5
B1-Q7	Kendall, W.B.	190,000	0	0	0	0	27	8
B1-Q8	Fullerton Post & Pole Company	157,000	0	5	1	0	7	2
B1-Q10	Kendall, W.B.	191,000	0	9	2	0	6	3
B1-Q12	IKO Industries Ltd.	252,700	0	36	1.5	0	3.5	0.5
B1-Q15	IKO Industries Ltd.	215,000	0	2	0	0	9.5	7
B2-Q2	Spray Lakes Sawmills Ltd.	1,000,000	0	13	2	34.5	67.5	6
B1-L7	Fullerton Post & Pole Company		0	0	0	0	2	0
B1-L10	Kendall, W.B.		0	0	0	0	2	0
B1-L12	Kendall, W.B.		0	0	0	0	0	2
B1-Q16	(no quote holder)		1	34.5	3	1	36.5	32.5
B2 (north Twp 15)	Foothills Timber, Spray Lakes Sawmills Ltd.		0	11	0	4.5	22	0
Other un-allocated	(north twp 15 and south of Bow River)		0	18.5	0.5	0	37	26.5
MTU's	Miscellaneous Timber Use Areas		0	0	0	0	6	18.5
			1	129	10	40	246	114

Above figures are exclusive of Protection Forest, Kananaskis Experimental Forest, Patented lands and Indian Reserve lands.

APPENDIX A

ii. NAMES AND ADDRESSES OF STOCK ASSOCIATION OFFICIALS*

1. Highwood Stock Assoc., D. Diebel, Longview, Alberta
Covering Highwood, Sullivan Flat, Deep Creek and Blue Ridge Allotments.
2. South Sheep Stock Assoc., R.J. Chalmers, Millarville
South Sheep Allotment.
3. North Sheep Stock Assoc., Mrs. Norma Wildman, R.R. 1, Millarville
4. Elbow Stock Assoc., G. Ingveld, R.R. 1, Millarville
Covers Elbow, McLean, Fish and Bragg Creek.
5. Jumping Pound Stock Assoc., C. Copithorne, Box 325, Cochrane.

iii. COAL LEASE HOLDERS - APRIL 30, 1972*

Arjay Kirker Resources Ltd.

Pat Burns Coal Mines Limited

Manalta Coal Limited

Robert Atkens Doyle

Concord Engineering Ltd.

Abtec Equipment

Donald Colin Webster

Pocaterra Mines Ltd.

Gerald Reginald Steeves

R.S. Matheson

John Lloyd Gingles

Can Pac Mineral Limited

Phillip Roy Swainson, Stanley Kruszewski, Gerald Reginald Steeves, and William
Brian Kure

C.N.W. Oil Limited

APPENDIX A

iv. OIL AND GAS LEASE HOLDERS AS OF APRIL 30, 1972*

Shell Canada Limited

Trudel Minerals

Chevron Standard Limited

Canadian Homestead Oils Ltd.

Amerada Minerals Corp. of Canada Ltd.

Imperial Oil Ltd.

Columbian Northland Exploration Ltd.

Siebens Oil and Gas Ltd.

Atlantic Richfield Canada Ltd.

Gulf Oil Canada Limited

Home Oil Company Limited

British American Oil Company

*The Alberta Wilderness Association has attempted to identify any companies having an interest in the study area but cannot guarantee the completeness or accuracy of the above lists.

APPENDIX C

i. NAMES AND PLACES

The history of our province is reflected in its varied place names, so too is the history of this study area reflected in the names of the various features. The following is a selection of some of the more interesting names and their derivation.

Bluerock Creek - descriptive of colour of rock.

Mt. Burns and Burns Creek - after the Burns Mine, which in turn was named after pioneer Pat Burns of Calgary.

Elbow River - "it flows eastward from the Rockies to the 'elbow' about five miles south of Calgary, where it turns abruptly northward." "Hokaikshi" of David Thompson, 1814; "Hokaikshi or Moose River" on Arrowsmith's map, 1859; up to 1880, often called Swift Creek.

Elpoca Mountain - so named because it is at the head of the Elbow River and Pocaterra Creek.

Fisher Range - east of Kananaskis River; range named by Captain Palliser, probably after a family, one of whose members accompanied him on a hunting excursion, in New Orleans in 1847.

Highwood Range and River - High-wood river (Ispasquehow) on Palliser map, 1865; Spitches on David Thompson map, 1814; Spitchi or Ispisquehow on Arrowsmith map, 1859; called High Woods river by Blakiston; translation of Indian name, spitzee, which is called because the river is on nearly the same level as the prairie instead of in a "bottom"; as a result, the belt of timber along the stream is much "higher" than usual, and is visible at a considerable distance; the Blackfoot name of the upper portion of the river is sapow or "wind" river.

Jumping Pound Creek - from a high steep bank near its mouth, where the buffalo were driven over and killed - a buffalo "pound".

Kananaskis - named by Captain Palliser after "an Indian of whom there is a legend, giving an account of his most wonderful recovery from the blow of an axe, which had stunned but failed to kill him."

Lineham Creek - named after John Lineham, rancher and member of Territorial Legislative Assembly in 1888.

Mount McDougall - named by Dawson in 1884 after Rev. George and John McDougall, missionary to Stonys.

Mist Mountain - from clouds on mountain when named by Dr. G.M. Dawson in 1884.

APPENDIX C

Misty Range - named by Dr. G.W. Dawson in 1884 from clouds that covered the summit.

Nihahi Creek - Stony word meaning "rocky".

Opal Range - named by G.M. Dawson after small cavities found here, lined with quartz crystals, coated with films of opal.

Pocaterra Creek - after George Pocaterra, Italian rancher in foothills west of High River; he was the first to prospect the Kananaskis district for coal.

Quirk Creek and Mountain - named after J. Quirk, early settler.

Mount Rae - named by Sir James Hector after Sir John Rae, Scottish explorer who searched for Franklin expedition.

Sibbald Creek - after Frank Sibbald, nearby rancher, son of pioneer teacher Andrew

Sheep River - so named because it is a favourite haunt of Rocky Mountain Sheep.

Storm Mountain - named by Dr. George Dawson for numerous storm clouds on summit.

Tombstone Mountain - named by G.M. Dawson from a peculiar collection of pinnacle-like slabs near the summit resembling tombstones.

Mount Ware - named after Negro cowboy and rancher, John Ware.

ii. HISTORICAL SOURCES AND FURTHER READINGS

Patterson, R.M., The Buffalo Head, MacMillan and Co., Toronto, 1961.

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Riley, D., Primrose, T. and Dempsey, H., The Lost Lemon Mine, Frontier Book No. 4 Frontier Press, Calgary n.d.

Laurie, John, "The Stony Indians of Alberta", Glenbow, publication of Glenbow-Alberta Institute, Vol. 4, No. 3, May-June, 1971.

Palliser, J., "The Papers of the Palliser Expedition, 1857-1860", edited by Irene Spry, Publications of the Champlain Society, Champlain Society, Toronto, 1968.

APPENDIX C

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5. Paetz, M.J. and J.S. Nelson, "The Fishes of Alberta", Commercial Printers, Edmonton, 1970.
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9. Moss, E.H., "Flora of Alberta", University of Toronto Press.
10. Craighead, J.J., Craighead, F.C., Davis, R.S., "A Field Guide to Rocky Mountain Wildflowers", Houghton Mifflin Co.

iv. REFERENCE MAPS

Maps of interest to the Wilderness user are the Composite Forest Cover Series (820 S.E., 82J S.E. and 82J N.W.; 1" = 2 miles) available from the Provincial Department of Lands and Forests, Natural Resources Bldg., Edmonton, and a number of the National Topographic Series Maps, issued by the Geological Survey of Canada which are available either through private mapping services in Calgary and Edmonton, or the Institute of Petroleum and Sedimentary Geology, 3303 33rd Street N.W., Calgary. Useful maps in the National Topographic Series are 1:250,000 (1" = 4 miles) 82J; 1:50,000 (1" = 1 mile) 820 3E, 82J 15, 82J 10E & W, 82J 7E (W).

APPENDIX C

v. CORRESPONDENCE

November 10, 1971 - C. Copithorne, Minister of Highways and Transport.

December 20, 1971 - W.D. Dickie, Minister of Mines and Minerals.

January 21, 1972 - W.J. Yurko, Minister of the Environment.

January 21, 1972 - R.G. Steele, Director of Forestry, Department of Lands and Forests.

July 20, 1972 - F.W. McDougall, Alberta Forest Service, Department of Lands and Forests.

vi. CONTRIBUTING AUTHORS

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Brian Kregosky

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Floyd Stromstedt

Gary Trottier

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Highwood Pass and Forestry Trunk Road, the North and West	
Boundaries of the Elbow-Sheep Wilderness	Gary Trottier



ALBERTA WILDERNESS ASSOCIATION

The Alberta Wilderness Association was formed in 1968 to:

- (i) safeguard Alberta's remaining wildlands from the destructive hand of man so that this, and future generations may continue to enjoy our North American Wilderness Heritage.
- (ii) provide a vehicle through which Albertans may speak to their elected representatives and government officials on matters concerning wilderness conservation and management.

To this end The Association has encouraged the government to pass a Wilderness Areas Act that Provides for primitive recreational pursuits as well as ecological or benchmark wilderness. Currently Alberta's Wilderness Act provides only for the latter. Wilderness where primitive recreations of fishing, hunting and wilderness travel by horse can be practiced is also necessary. The Association will continue to work for appropriate legislation so that both types of wilderness may receive statutory protection.

The Elbow-Sheep area was first proposed for formal protection in 1968. Since then additional areas in Alberta have been receiving our attention. These include the South Castle, Upper Oldman and Hidden Creek, North Porcupines, Upper Kananaskis, South Ghost, Clearwater Corridor, Upper Ram and White Rabbit, Folding Mountain, Willaure and Yakwa. Each of these will be the subject of a presentation similar to the Elbow-Sheep Proposal.

The Elbow-Sheep proposal is significant, not only because it is the first of a series, but also because it will be a part of the Association's presentation to the provincial government's Public Hearings on "Land Use on the Eastern Slope of the Rockies" in the spring of 1973. We urge you, as concerned citizens, to state your views at these Hearings which commence sometime after March, 1973. Further information may be obtained from the Environment Conservation Authority, 9912 - 107th Street, Edmonton.

The importance of the East Slope Public Hearings cannot be overemphasized. They will undoubtedly influence the government in its land-use decisions for our East Slope Mountains and Foothills. A substantial portion of our East Slope lands still remain in a wild state. Competing uses for these wildlands include strip-mining; oil and gas and hard rock mineral exploitation; timber production, especially for pulp and paper; facility-oriented commercial recreation developments; mechanized recreational use by snowmobiles, trail-bikes and all-terrain vehicles. The Alberta Wilderness Association will attempt to delineate and press for the protection of areas which, in our opinion, are best suited for wilderness as a primary use.

We very much need your support in this work. We solicit your membership and your participation, both in the work of the Association and at the Public Hearings:

Help Protect Alberta's Wilderness Heritage

Join Now

ALBERTA WILDERNESS ASSOCIATION

Box 6398, Station "D"
Calgary, Alberta
T2P 2E1

Please return this form with your membership fee

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