

SB

/ 8 /

COMMITTEE REPORT

SENATE

2/24/77

5/26/77

Date

Mr. President:

The Committee on RESOURCES has had SN 181 ~~creating Orca Inlet and Controller Bay critical habitat areas~~ under consideration. A majority of the members of the Committee

- recommends it do pass
- recommends it do not pass
- recommends it do pass with attached amendment(s)
- recommends it be replaced with CS for _____ and that CS for _____ do pass
- (and) recommends it be referred to the _____ committee
- reports it back without recommendation *as follows:*
- AND attaches a report of its intent
- (other) _____

MEMBERS SIGNING THE MAJORITY REPORT:

Tom [unclear] *W. [unclear]*

[unclear] *DO PASS*

[unclear] *DO PASS*

MEMBERS NOT CONCURRING IN THE MAJORITY REPORT:

_____ recommends: _____

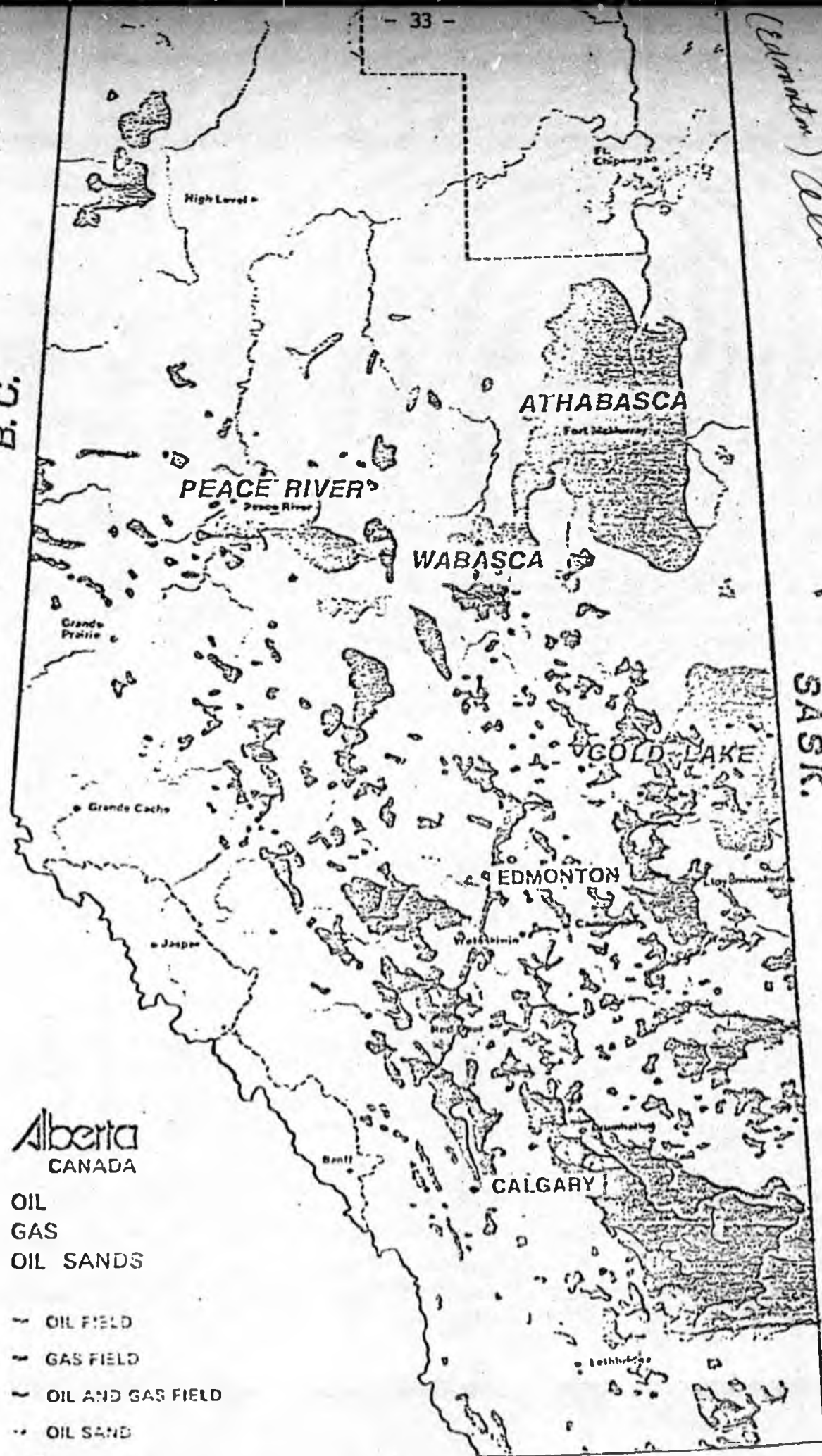
_____ recommends: _____

_____ recommends: _____

[Signature]
Chairman

THE FOLLOWING PAGES WERE TREATED AS
A UNIT IN THE ORIGINAL FILE.

B.C.



Alberta
CANADA

OIL
GAS
OIL SANDS

- OIL FIELD
- GAS FIELD
- OIL AND GAS FIELD
- .. OIL SAND

Fig 1

U.S.A.

(Edmonton) Alberta, Canada
 George Sullford
 Dept. Energy & Natural Resources
 Province of Alberta

SASK.

GOVERNMENT INCENTIVES TO EXPLORATION

FIGURE 1

Alberta's oil and gas resources extend over most of the province and constitute a major source of energy. To expedite the location of such resources, the Government of Alberta on July 28, 1972, approved the Natural Resource Revenue Plan. A main feature of this plan was an increase in annual revenues to the Government of about 70 million dollars commencing in 1973. The Alberta government felt this to be a fair and reasonable additional return to the citizens of Alberta for their ownership of a depleting and non-renewable resource. This dollar figure has increased since the initiation of the program due to the escalating price of crude oil.

To offset this increase in revenues from industry and to stimulate increased exploratory activity in Alberta, the Government implemented the Exploratory Drilling Incentive System. The program has undergone several modifications since it was introduced, but essentially consists of a monetary credit for an exploratory well drilled for oil or gas. The credit may be applied against taxes payable under The Freehold Mineral Taxation Act,

royalties, rentals, fees and bonuses on petroleum and natural gas Crown minerals rights. A producing incentive exploratory well may also qualify for royalty or mineral taxation exemptions.

The Exploratory Drilling Incentive System is administered jointly by the Alberta Department of Energy and Natural Resources and the Alberta Energy Resources Conservation Board. Determination of qualifying footage upon completion or abandonment of the incentive exploratory well is made by the Board. Determination of the credit to be established is made by the Department.

Due to the close relationship between geophysical and drilling activity, it is found desirable to provide incentives for geophysical exploration. It is considered vital to maintain a high level of geophysical work to ensure the continuity of the search for new oil or gas reserves.

Therefore, the Alberta Government, in taking a second step toward maintaining the necessary level of petroleum activity in the province, implemented on January 1, 1975, the Geophysical Incentive Program.

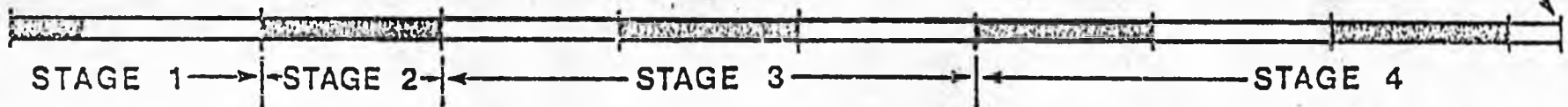
The credit for a geophysical incentive program is determined from a

GEOPHYSICAL

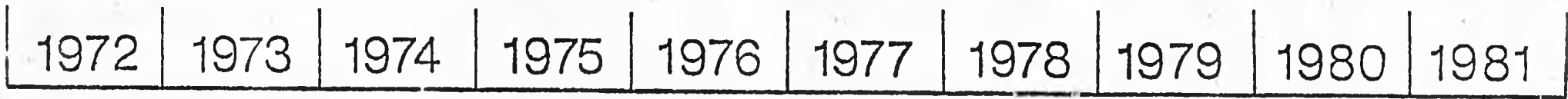


Scheduled
Termination
Dates

EXPLORATORY DRILLING



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DURATION OF INCENTIVE PROGRAMS

Source: ERCB

FIGURE 2

formula based on the number of miles of subsurface coverage recorded and the geographical area in which the survey was conducted. The incentive credits maybe applied against revenues coming to the Crown, for bonuses on petroleum and natural gas, Crown mineral rights, fees, rentals, royalties and freehold mineral taxes.

FIGURE 2

The Exploratory Drilling Incentive System was implemented on August 1, 1972, and was scheduled to be in existence for a period of five years terminating on December 31, 1977.

After an extensive government task force study, an amendment was introduced extending the Exploratory Drilling Incentive System to March 31, 1981.

At the time the Drilling Incentive program was implemented, it was estimated that only 50% of ultimate oil and gas reserves in Alberta had been discovered. Exploratory activity had declined and many companies with substantial land holdings were apparently shifting their exploratory activity to the frontier areas. For this reason, the Government tried to "tie-in" the Natural Resource Revenue Plan with the Exploratory Drilling Incentive System to benefit those

operators who undertook exploration in Alberta.

Between 1964 and 1969, the number of new field wildcat wells drilled in Alberta maintained fairly high levels - about 500 wells per year. In 1971, this number dropped to about 300 wells per year.

A further indication of both the decline and shift in exploratory activity was indicated by seismic crew activity in Canada. Seismic activity dropped from a peak of 972 crew months in 1967 to a 1970 low of 724 crew months.

The shift of activity away from Alberta during 1970 and 1971 was of greater significance. From 1961 to 1967, close to 70% of Canada's geophysical activity occurred in Alberta. In 1968 and 1969, Alberta accounted for just over 60% of the total. In 1970, more Canadian seismic activity occurred outside Alberta than in Alberta.

There was a substantial drop in bonuses from the sale of Crown mineral rights. During the period 1965 to 1969, these revenues averaged \$100 million per year. In 1970 and 1971, these revenues dropped to about \$25 million per year.

INCENTIVE WILDCAT WELL

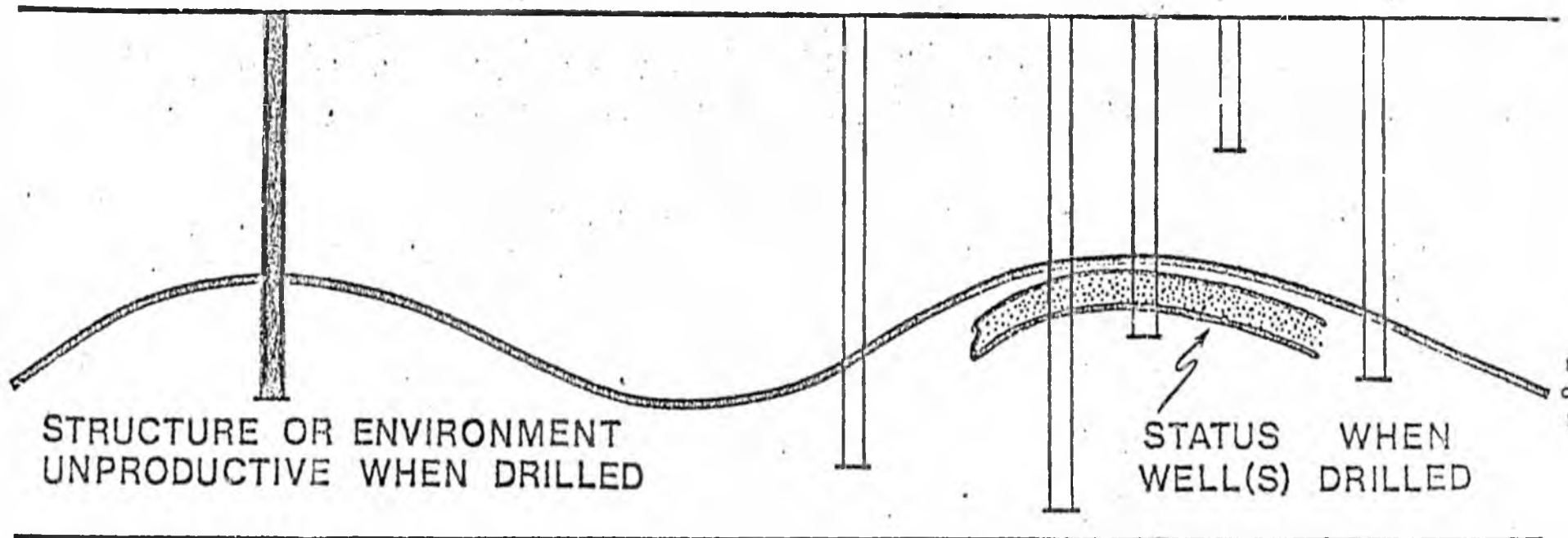
NON-QUALIFYING WELLS

N.F.W.

N.P.W.

D.P.T. DEV. S.P.T.

O'POST



In part after A.A.P.G.
J.R. Pow

INCENTIVE WILDCAT WELL

AUGUST 1, 1972 TO DECEMBER 31, 1973

FIGURE 3

The Exploratory Drilling Incentive System, within the Natural Resource Revenue Plan, was designed to stimulate the discovery of crude oil reserves and shift exploratory activity back to the province by providing substantial rewards to the wildcat entrepreneur.

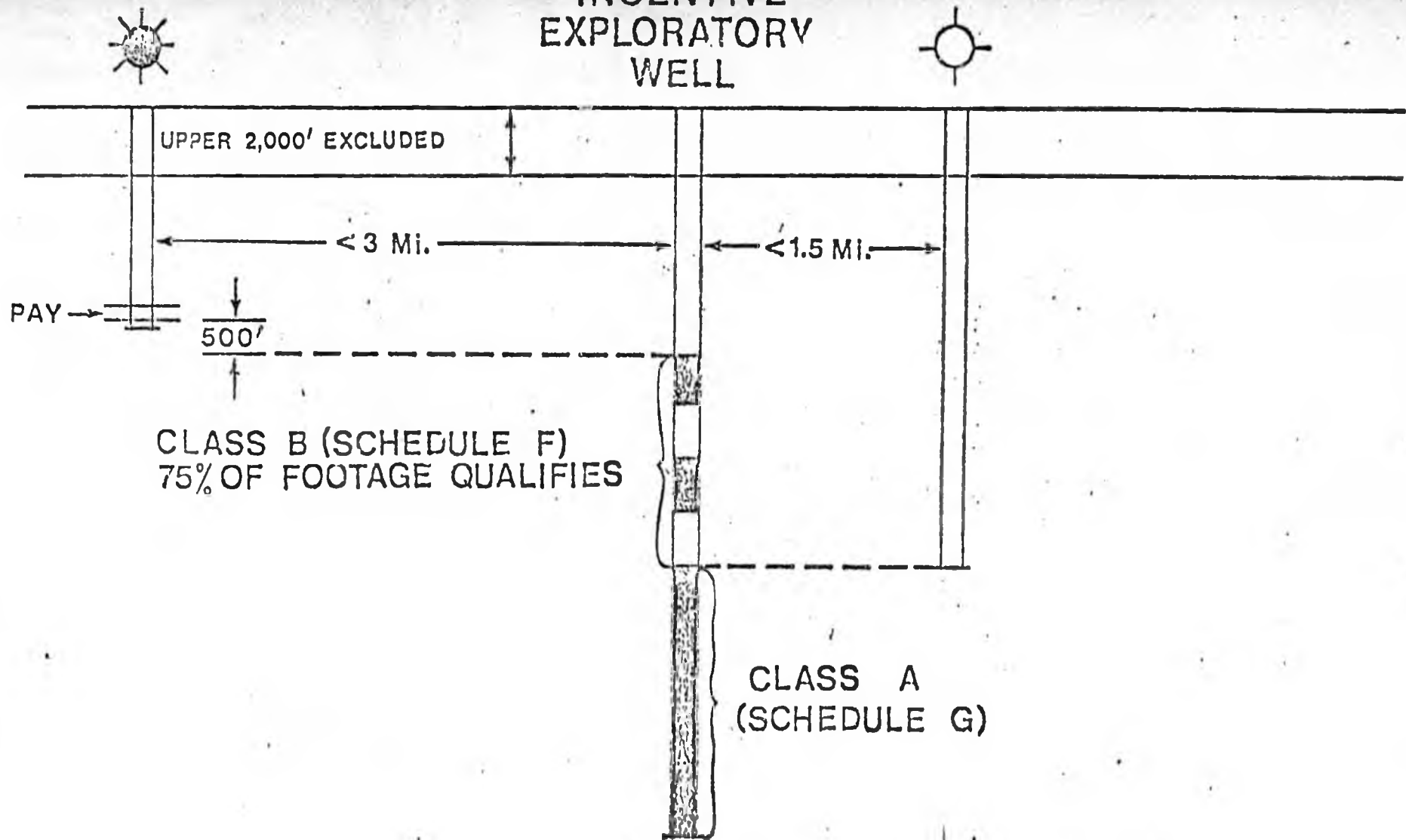
The objective of the Exploratory Drilling Incentive System was to encourage high risk exploratory drilling and increase the drilling activity in remote locations at a time when this type of drilling was declining in the province. The tendency in Alberta was to explore in known and reasonably accessible regions rather than stepping out in the search for new fields.

The Exploratory Drilling Incentive System has had several amendments since its original inception.

FIGURE 3

From August 1, 1972 to December 31, 1973, the program related to wells that were classified by the Energy Resources Conservation Board as "New Field Wildcats" under the "Lahee" classification system. A formula was derived which enabled the establishment of a credit equalling approximately 30% of the cost

INCENTIVE
EXPLORATORY
WELL

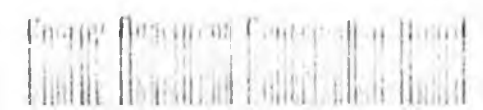


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TWO CLASSES OF QUALIFYING FOOTAGE
(EXCLUDING UPPER 2,000 FEET)

FIGURE 4



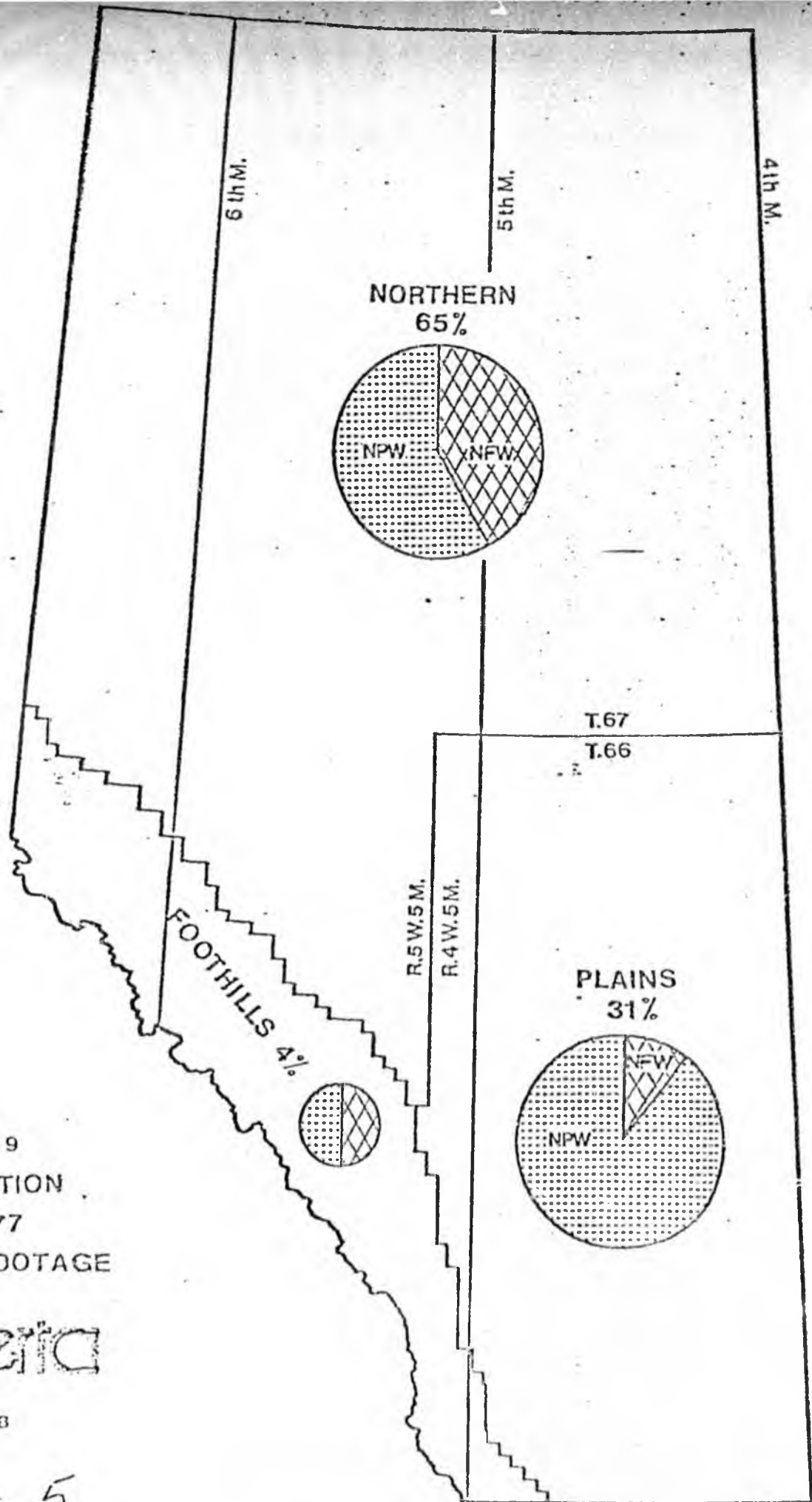
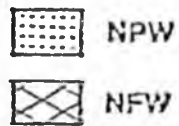


FIGURE 9
DISTRIBUTION
OF 1977
WILDCAT FOOTAGE

Alberta

SOURCE: ERCB

Fig 5

of the well. The total footage of a new field wildcat qualified for incentive credit. A five-year crude oil royalty "holiday" was granted.

During this 17 month period, \$16 million in drilling credits were earned by industry.

FIGURE 4

From January 1, 1974 to December 31, 1974 the program was expanded to include, along with the new field wildcats, about one-quarter of the more remote new pool wildcats and deeper pool footage. Figure 4 shows the principles that were adopted on January 1, 1974. The footage shown in white is known as Class "A" footage and it earned as credits, approximately 40% of the total recognized cost of the well. The Class "B" footage is applicable where a dry hole is within one and one half miles of the well. Class "B" footage earned about 30% support.

FIGURE 5

During this period, drilling costs were increased and a cost distinction was made for wells located in the Foothills, Northern and Plains regions.

These areas, as modified on February 26, 1975, are shown on Figure 5.

Added features included a two-year natural gas royalty "holiday" and authorization for credits to be used to defray bonus payments tendered for Crown oil and gas mineral rights. The credits could continue to be used to offset payments due for royalty, rental or freehold mineral tax.

On January 15, 1974, the Alberta Petroleum Marketing Commission was created. Prior to its creation incentive credits established could be used by the holder to satisfy oil Crown royalty payments. This was discontinued on January 15, 1974 by the Commission.

During this 12 month period, the credits amounted to roughly \$20 million and involved almost 600 wells.

From January 1, 1975 to December 31, 1977, the Government increased the benefits of the Exploratory Drilling Incentive System by expanding recognized well costs and by increasing the credit support for Class "A" and "B" footage to approximately 50% and 37½% respectively.

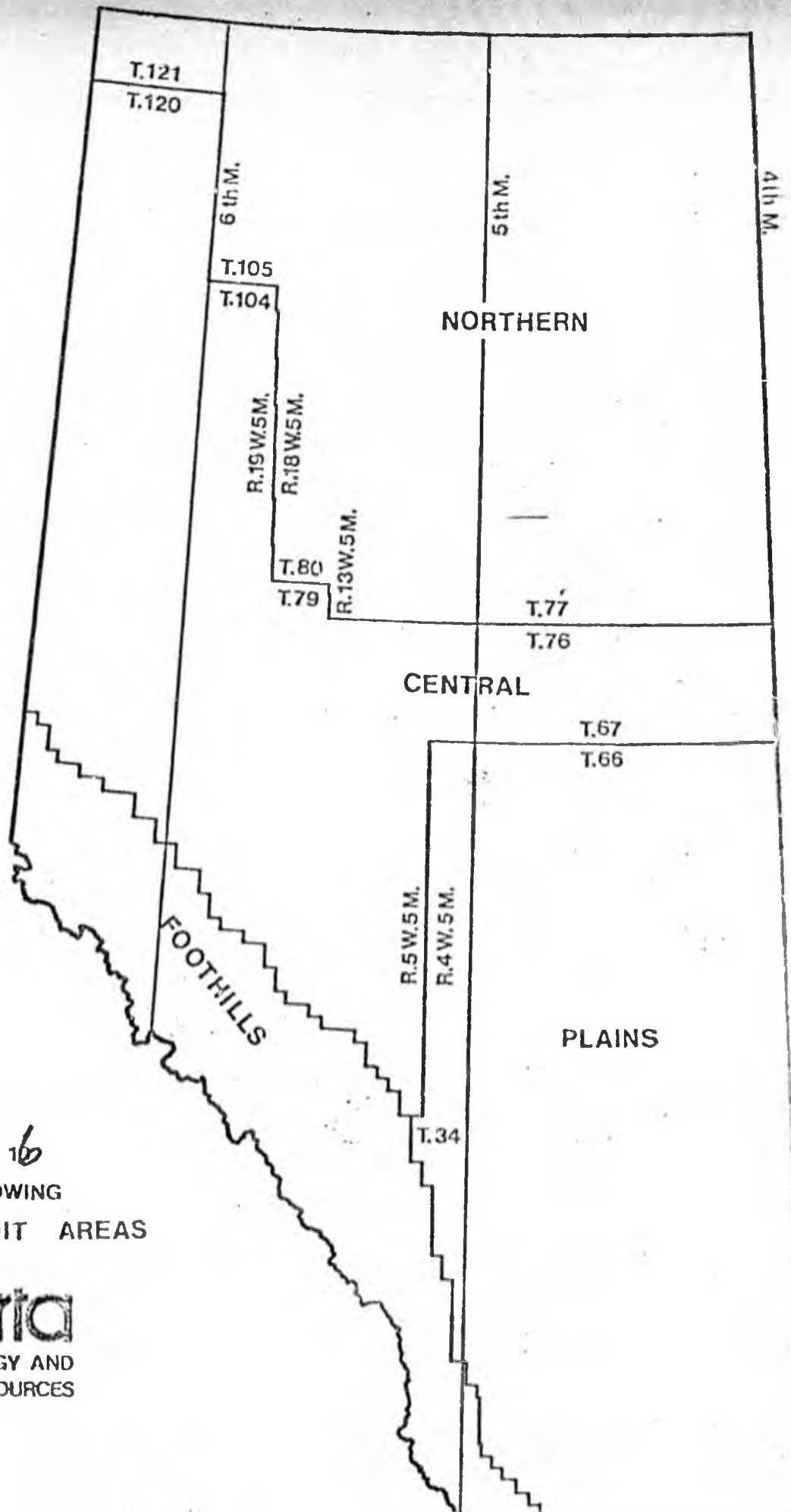
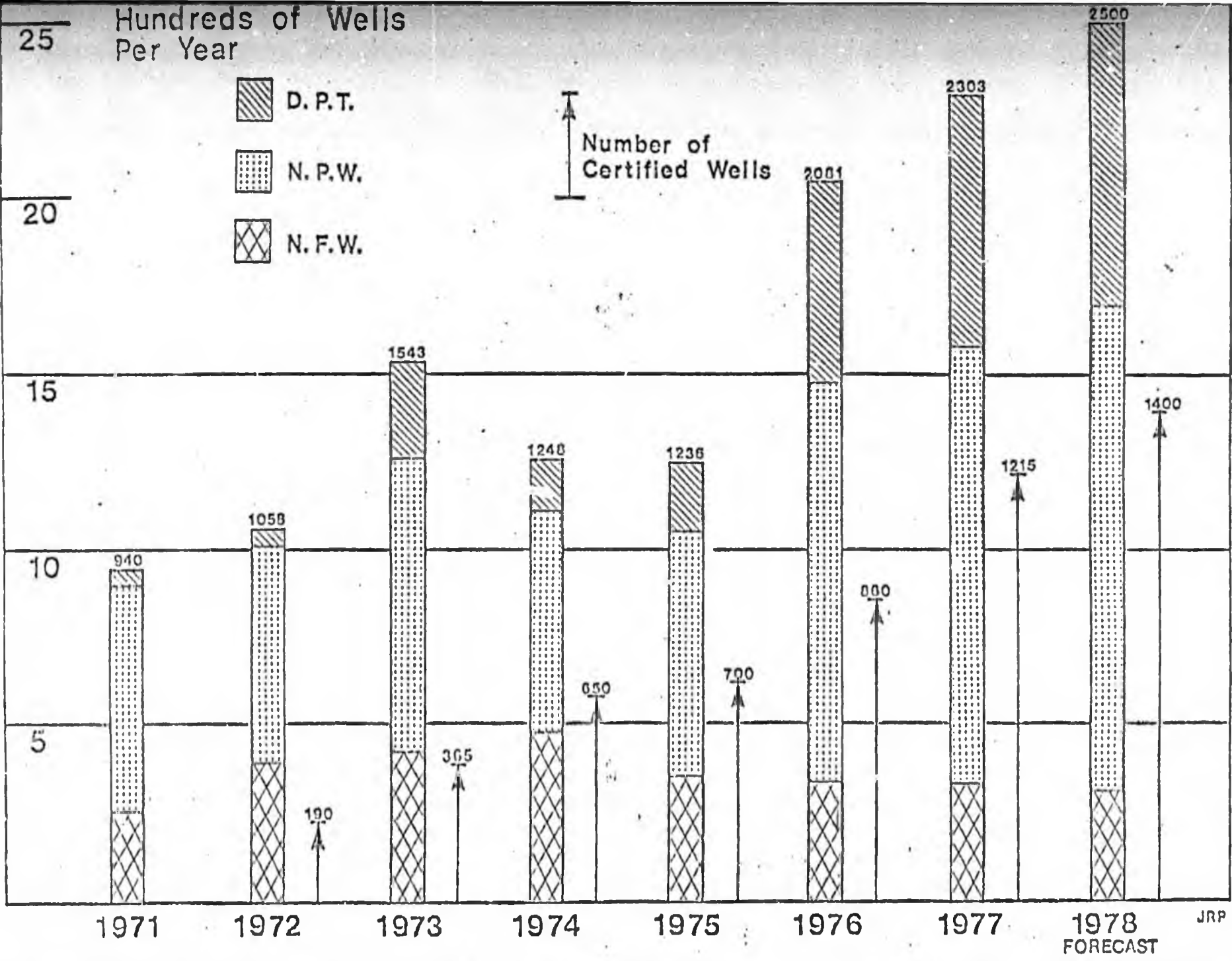


FIGURE 16
MAP SHOWING
DRILLING CREDIT AREAS





EXPLORATORY AND CERTIFIED WELLS, ALBERTA

Source: ERCA

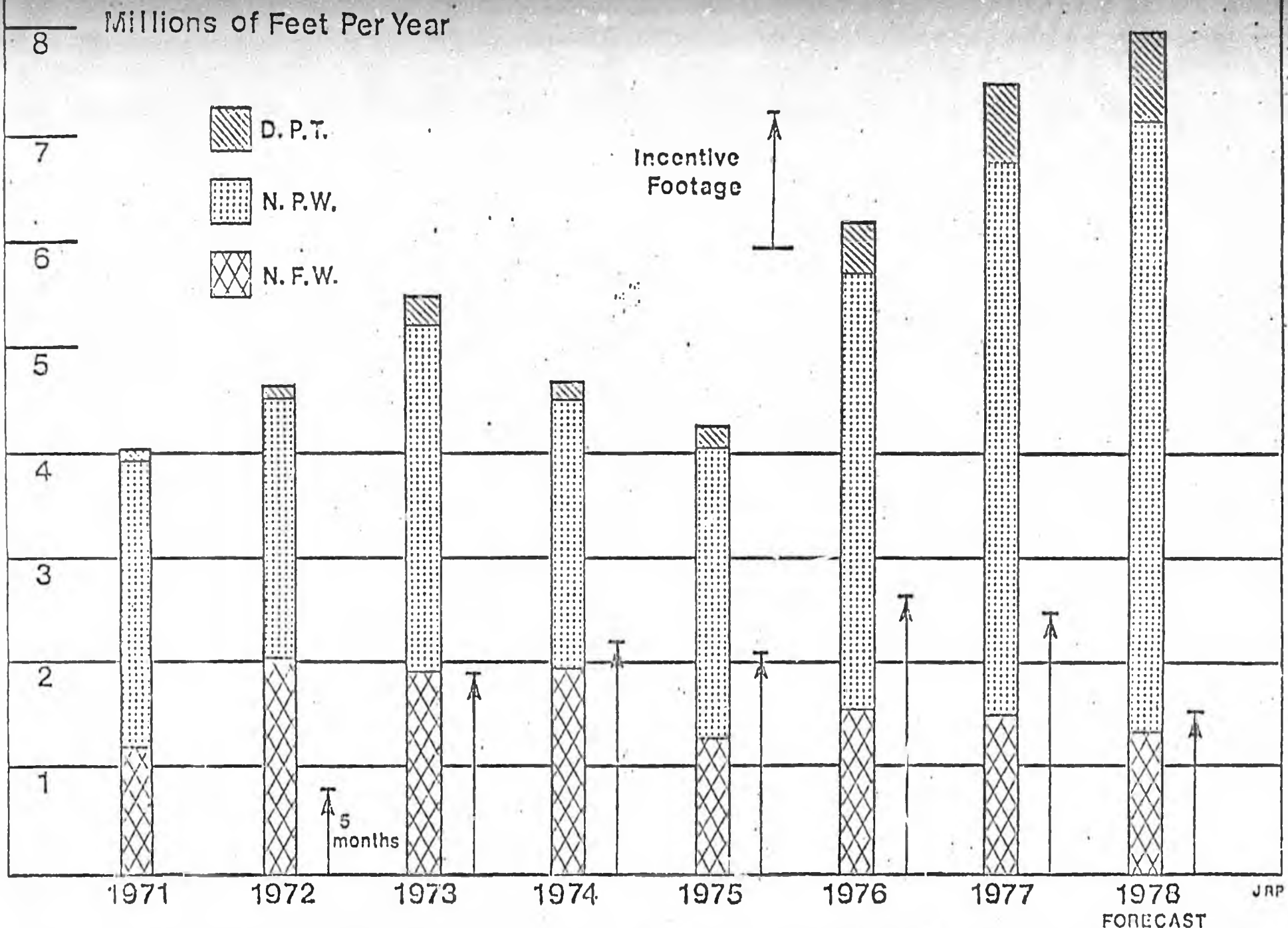
FIGURE 6

Commencing January 1, 1978 the drilling credit areas have been redefined. The Plains and Foothills Areas are unchanged, but the former Northern Area was divided into a Central and Northern Area. The boundary between the two new areas was defined on the basis on well costs, topographic and access considerations. The amendments also include the upper 2,000 feet of sediments from receiving any incentive credit and increase the credits for qualifying wells deeper than 3,500 feet.

For wells greater than 5,000 feet in depth, the incentive is increased by 25% to 45% depending on the location of the well.

FIGURE 7

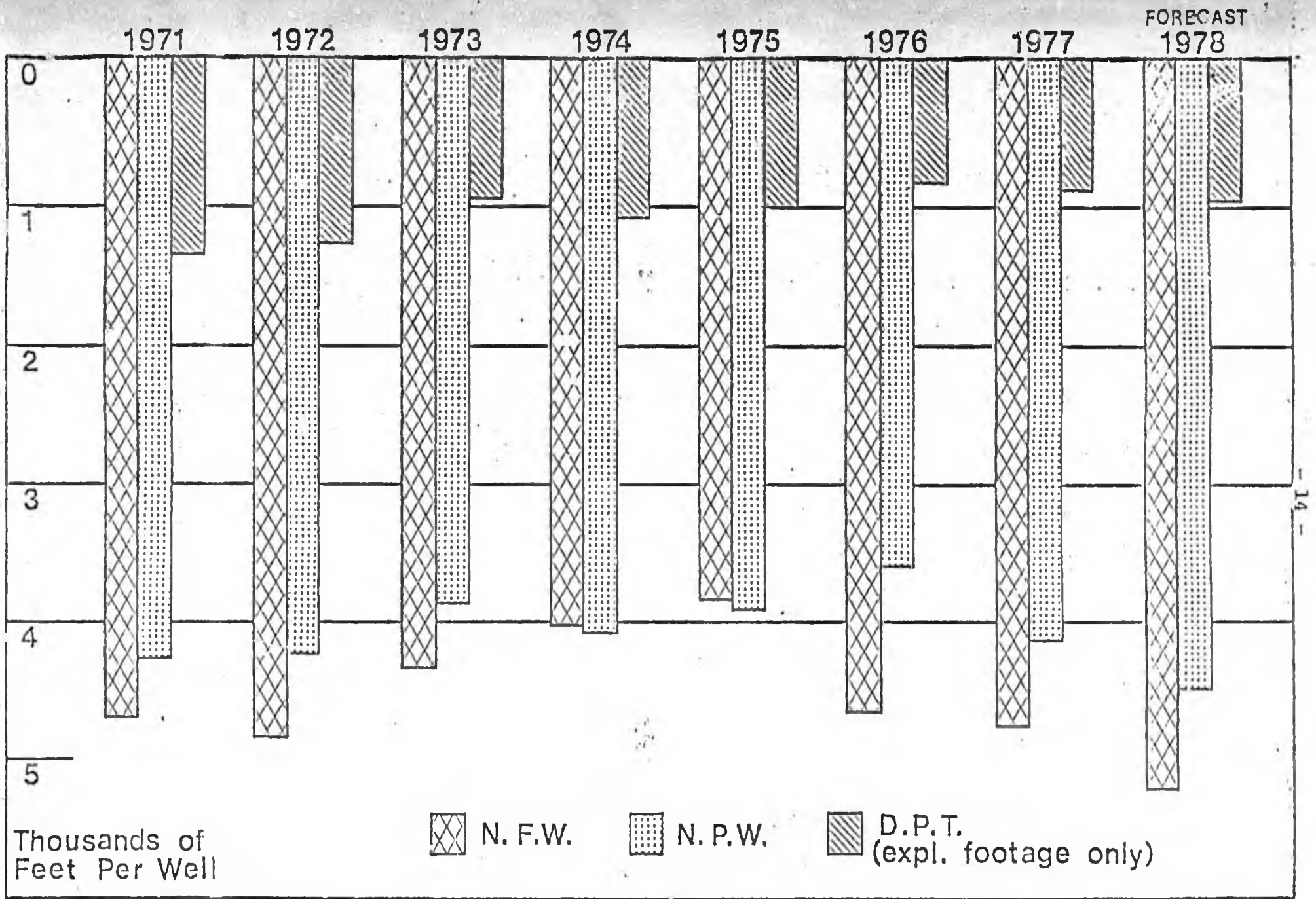
There has been a considerable increase in the number of exploratory wells drilled in Alberta since inception of the incentive program in 1972. There were 1,058 exploratory wells drilled in 1972 compared with 2,303 drilled in 1977. The number of wells qualifying for incentive foota e in 1972 was 190 compared to 1,215 in 1977. An increase is expected in 1978. The number of new pool



EXPLORATORY AND INCENTIVE FOOTAGE

Source: B&O, FICD

FIGURE 7



AVERAGE WELL DEPTH

JRP

wildcats and deeper pool tests have increased since the program began, but the number of new field wildcats have declined.

FIGURE 8

The amount of exploratory footage drilled in 1977 exceeded all previous years. Footage for new field wildcats remained similar to 1976 at 1½ million feet, new pool wildcats increased to 5¼ million from 4¼ million feet in 1976, and deeper pool tests increased to ¾ million feet from ½ million feet.

The amount of footage certified under the program has increased since inception, equally divided between New Pool Wildcats and New Field Wildcats. In 1977 a total of 2½ million feet were certified to receive incentive footage. This figure shows an increase of 32% from the first full year the program was in operation.

Normally, 100% of the new field wildcat footage, 20% of the new pool wildcat footage, and 80% of the deeper pool test footage qualified for incentive benefits.

FIGURE 9

The average well depths per year has shown a gradual decrease from the period 1971 to 1976, but a slight upswing occurred in 1977. New field wildcats

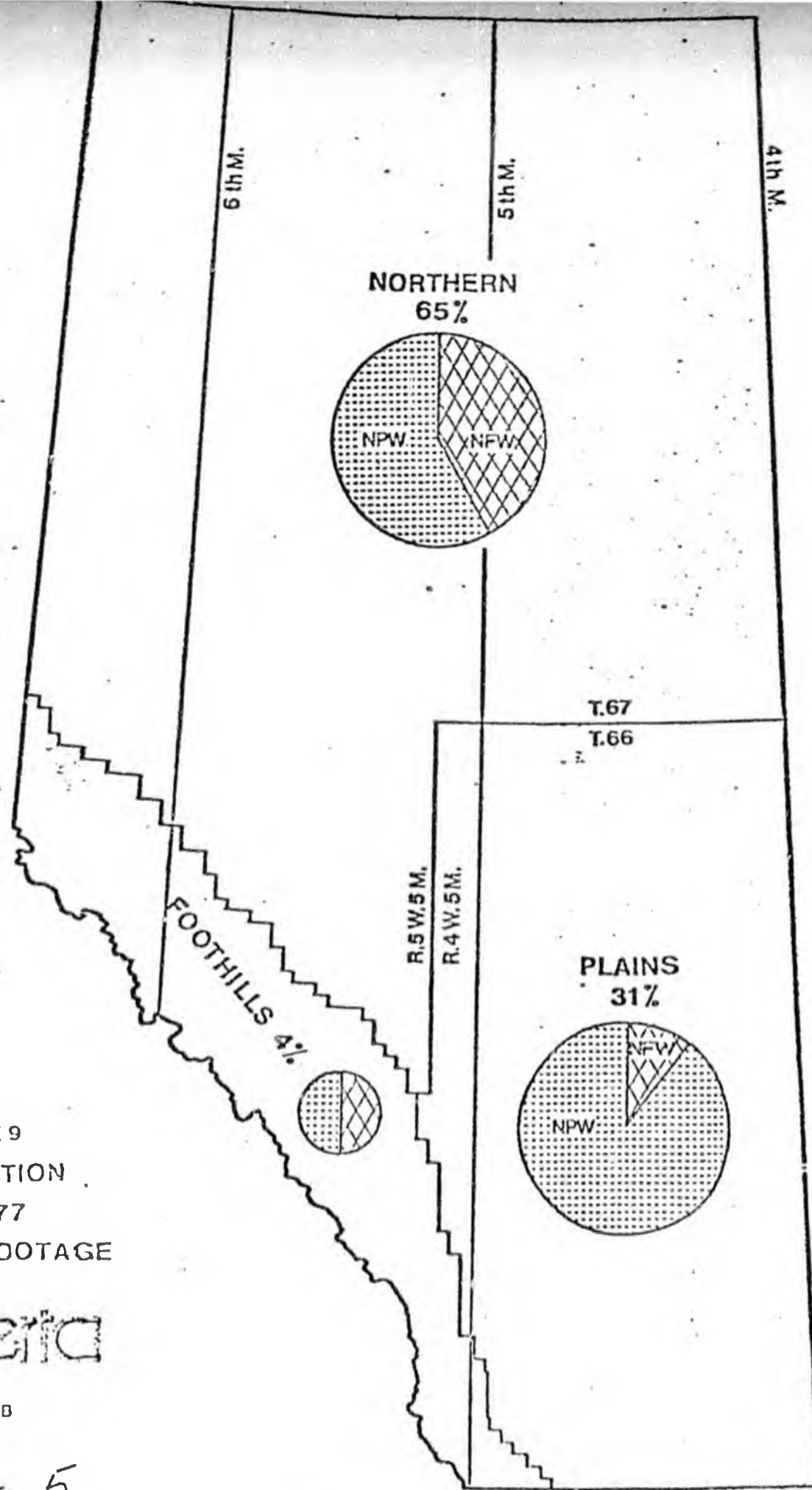
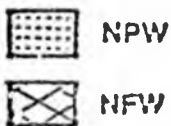


FIGURE 9
DISTRIBUTION
OF 1977
WILDCAT FOOTAGE

Alberta

SOURCE: ERCD

Fig 5

averaged 4,800 feet in 1977, new pool wildcats averaged 4,100 feet, and deeper pool tests averaged 1,000 feet.

FIGURE 5

The majority of the exploratory footage drilled in 1977 was in the Northern Areas. The total footage drilled here was 65% of the total exploratory footage. Of this 65%, new pool wildcats constituted 65% and new field wildcats 36%.

Exploratory drilling in the Plains Area accounted for 31% of the total, with new pool wildcats forming 90% of the figure, and new field wildcats about 10%. Drilling footage in the Foothills Area constituted 4% of the total. Of this 4%, half were classed as new pool wildcats and half as new field wildcats. Deeper pool tests formed less than 10% of the total exploratory footage for the province in 1977.

These figures indicate a shift of emphasis since 1976 from the Plains Area to the more remote Northern Area. In both areas, the total footage of new field wildcats has taken a considerable drop from the 1976 figures. New field wildcat footage in the Foothills Area has increased.

Geophysical Incentive Program

On January 1, 1975, the Alberta Government implemented the Geophysical Incentive Program to stimulate the level of seismic exploratory activity in Alberta. The program was scheduled to terminate on March 31, 1978. This program has been extended to March 31, 1980 through a recent amendment to the Regulations. The Government recognizes the positive effects improved geophysical techniques have on drilling success rates and feels geophysical work must be encouraged to search for the less obvious hydrocarbon accumulations.

The Geophysical Incentive Program is administered by the Department of Energy and Natural Resources.

Geophysical activities, primarily in the form of reflection surveys, provide the initial technical basis on which many exploration "plays" for new oil and gas deposits are planned. Such surveys have performed a key role in finding many of the prolific reef accumulations of hydrocarbons in the Alberta plains. Geophysical data is essential to interpreting the complex rock structures of the foothills which are expected to contain major new deposits of hydrocarbons.

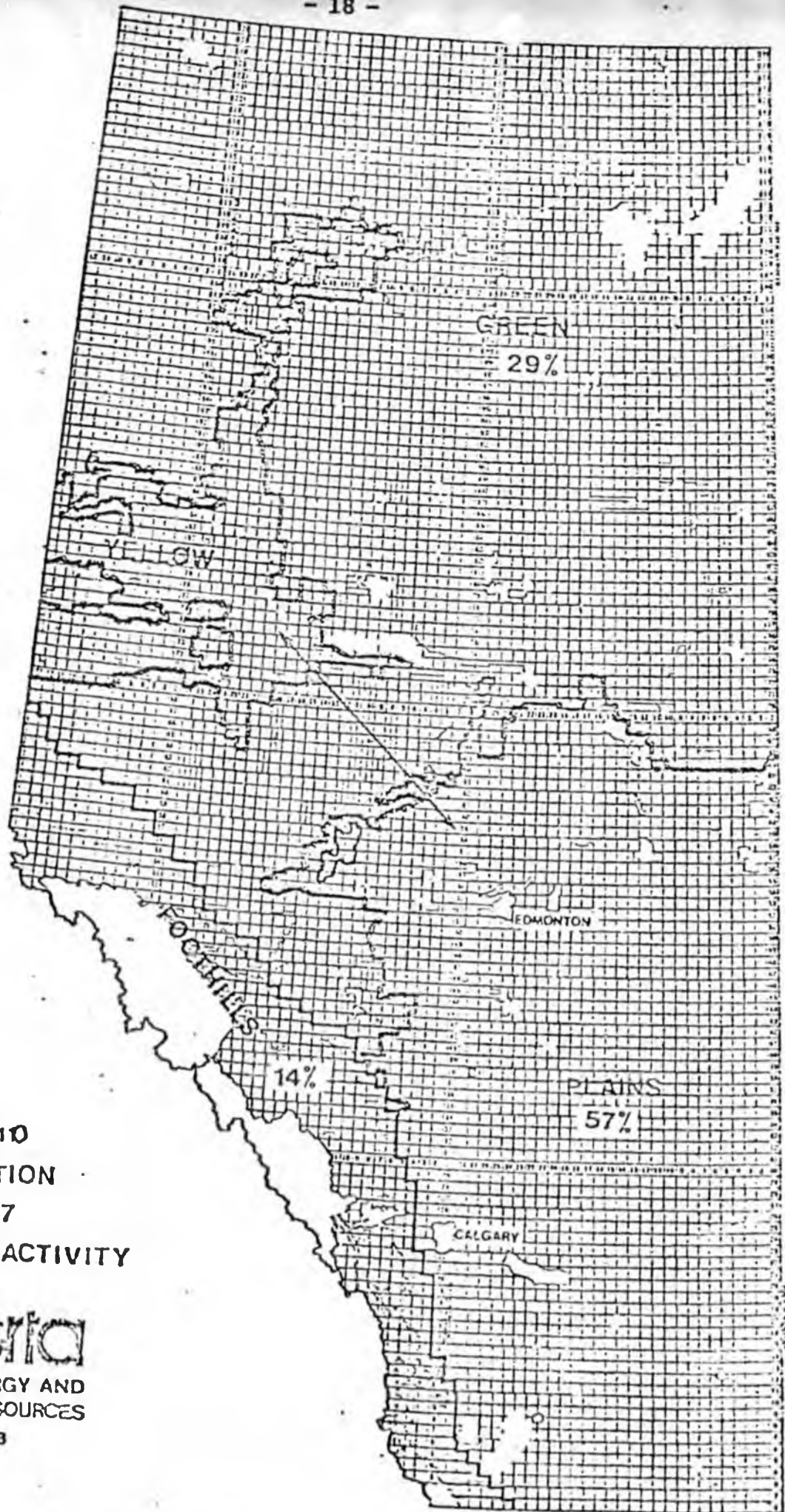


FIGURE 10
DISTRIBUTION
OF 1977
GEOPHYSICAL ACTIVITY

Alberta
ENERGY AND
NATURAL RESOURCES
JUNE, 1978

The main features of the Geophysical Incentive Program are:

(a) The incentive will apply to seismic surveys certified after

January 1, 1975.

Before 1980

(b) Incentive credits are established in the name of the licensee

however, these credits may be allocated to partners sharing

in the cost of the seismic program.

FIGURE 10

The incentive credits are determined from a formula based on the number of miles of subsurface coverage and the area in which the survey is conducted. Surveys carried out in difficult terrain in the Foothills and Green Areas receive a larger incentive credit than surveys carried out in the Plains region.

The determination of credit for a certified geophysical incentive program was calculated on the number of miles of minimum (400%) subsurface coverage by the following equation:

$$\text{Credit (dollars)} = 500 K M$$

Where K is the incentive factor for different geographic areas in Alberta where the program was conducted M is the number of miles of minimum subsurface

coverage.

The incentive credits may be applied in the same manner as the exploratory drilling incentive credits. A licensee may apply for the monetary equivalent of the credit where he is not the owner of a mineral agreement or a freehold mineral right.

Any geophysical information and data obtained pursuant to a geophysical incentive program must be made available by the licensee to any person for a period of not less than five years

(a) three years after the date the program was certified.

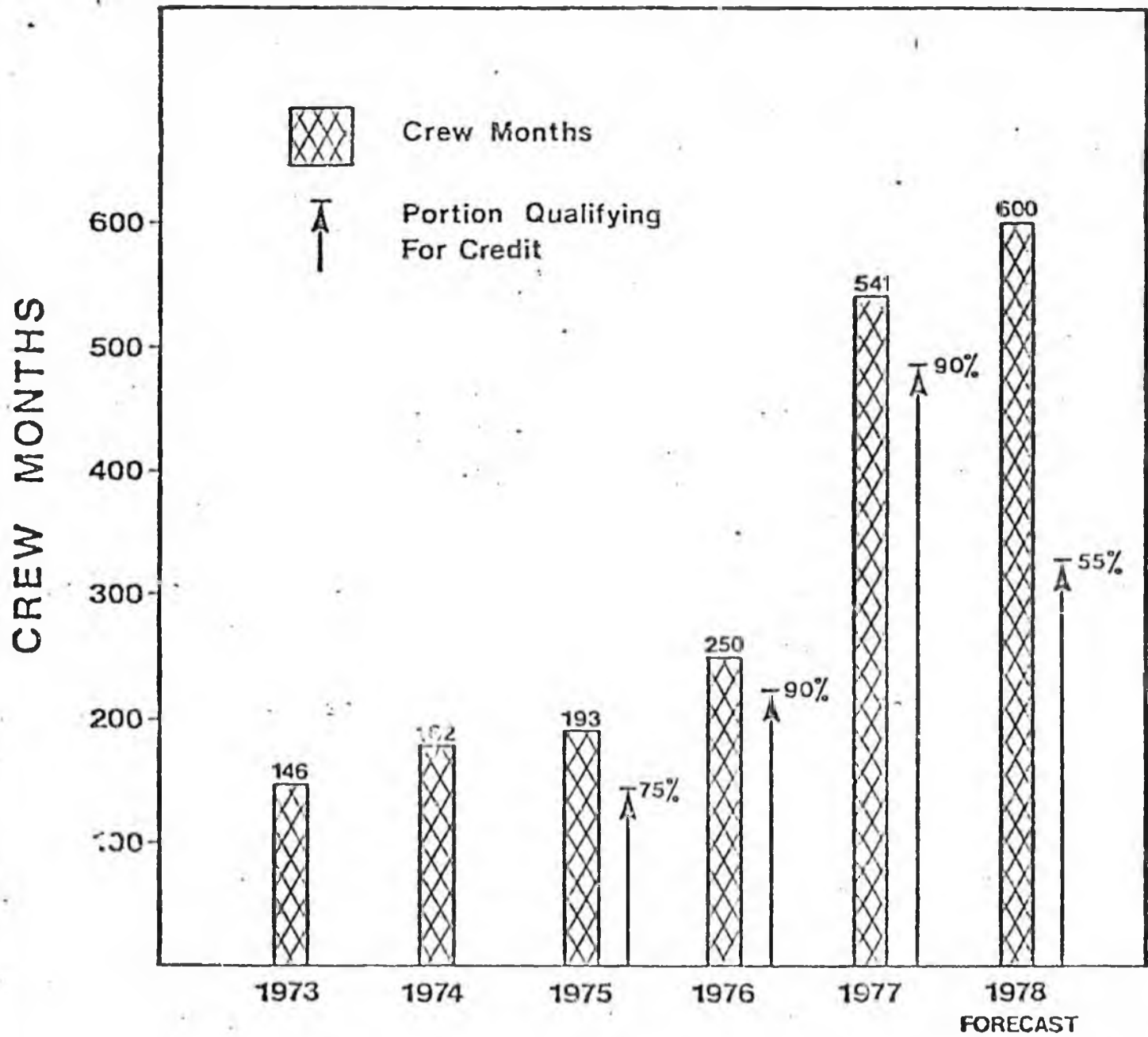
(b) at a cost to that person of 60% of the credit determined for each mile of minimum subsurface coverage.

Amendments to the Geophysical Incentive Program effective April 1, 1978, reducing credit by 50% will result in a phase down of the program,

Credit (dollars) = 250 K M

The minimum subsurface requirements have been increased requiring 600% in the white and yellow area and 1200% in Foothills and Northern Areas.

The total number of miles of subsurface coverage in 1977 that qualified for incentive credit was 28,000 miles. This figure reflects an increase of



SEISMIC ACTIVITY & PORTION QUALIFYING FOR INCENTIVE CREDIT

FIGURE 12

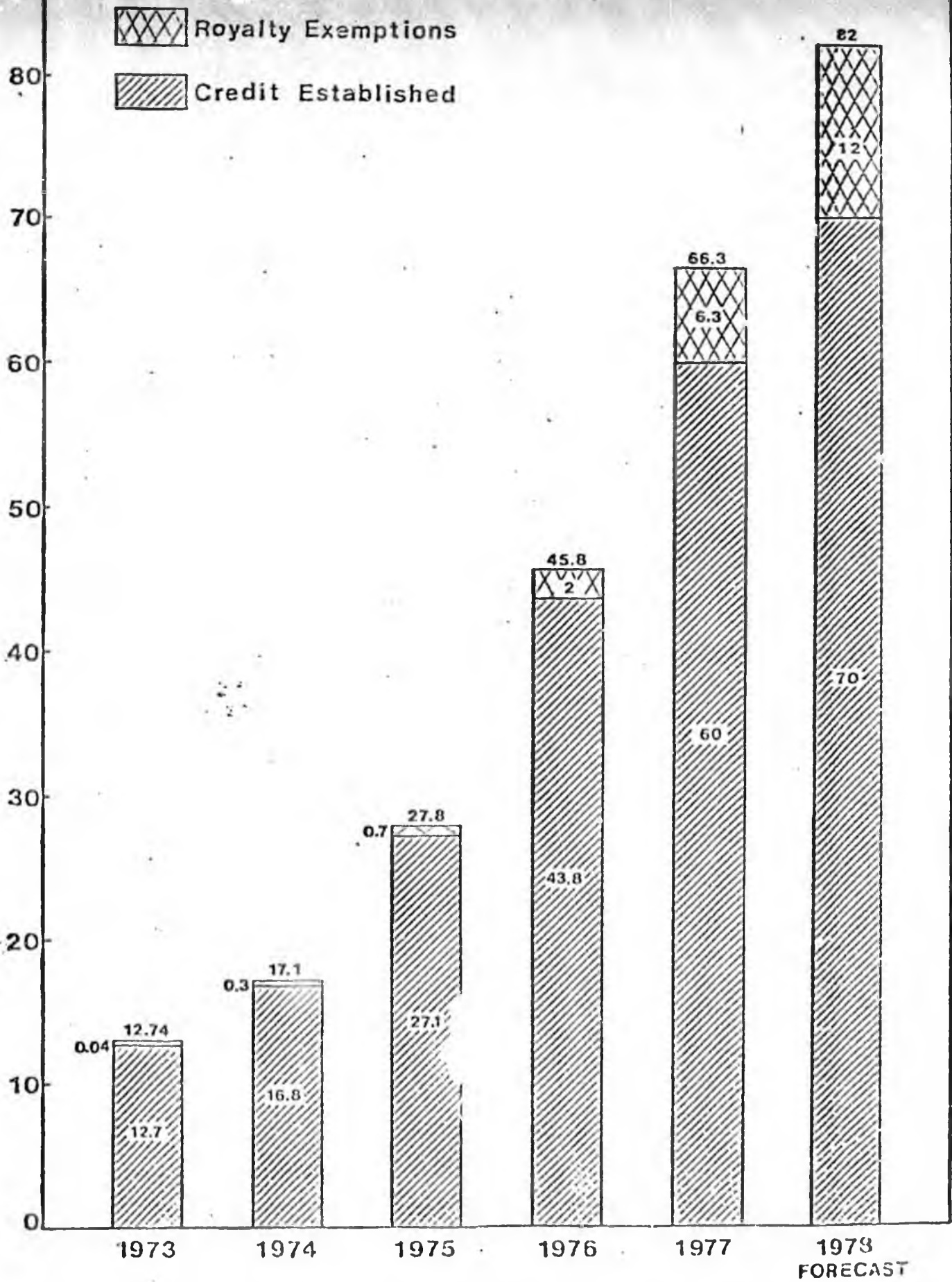
82% over the 1976 figure of 15,400 miles. Of this total, 16,105 miles was in the Yellow-Plains Area, 7,994 miles was in the Green Area and 3,921 miles was in the Foothills Area. These figures show an increase in activity in the Yellow-Plains Area, a decrease in the Foothills Area and unchanged activity in the Green Area.

FIGURE 12

This figure shows the crew activity from 1973 to 1978. In 1977 there were 541 crew months of activity, compared with 193 crew months in 1975 the first year the incentive program was in operation. The forecast is that the number of crew months will continue to increase.

In 1976 and 1977, 90% of the programs conducted in the province were certified under the Geophysical Incentive Program Regulations compared with 75% in 1975. The amendments effective April 1, 1978 are expected to reduce the number of programs submitted to the Department for credit. It is estimated that 55% of the programs shot in Alberta will receive incentive credits.

MILLIONS OF DOLLARS



INCENTIVE COSTS ASSOCIATED WITH DRILLING ACTIVITY

FIGURE 13

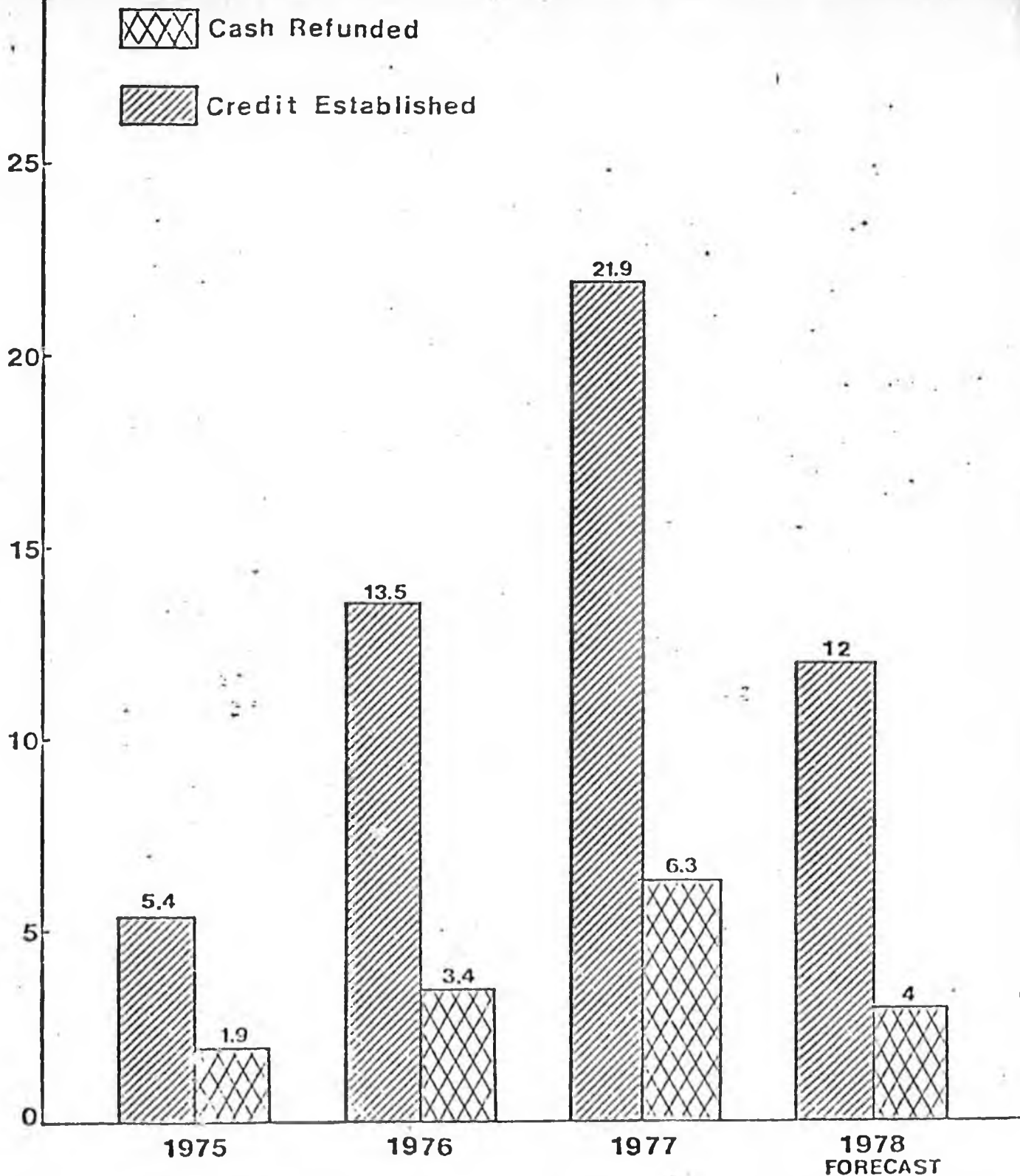
FIGURE 1

The Exploratory Drilling Incentive System and the Geophysical Incentive Program were initially devised to reduce the burden placed on industry when the Natural Resource Revenue Plan was initiated. The incentive programs were meant to reduce the increased royalties owed on Crown oil and gas mineral rights by financing a portion of the exploration costs. These incentive costs have escalated considerably in the years since the inception of the programs from a few million dollars to tens of millions of dollars per year.

The total costs to the Alberta Government for credit, royalty exemptions, cash refunds and administration of the programs amounted to over \$90 million in 1977.

The cost for the Exploratory Drilling Incentive System in 1977 was 66.3 million dollars. This figure shows an increase over the 1973 costs of 12.7 million dollars. The credit established in 1978 is forecast to be \$82 million. During the same period royalty exemptions have increased from \$0.04 million to \$6.3 million. It is forecast that royalty exemptions will reach \$12 million in 1978.

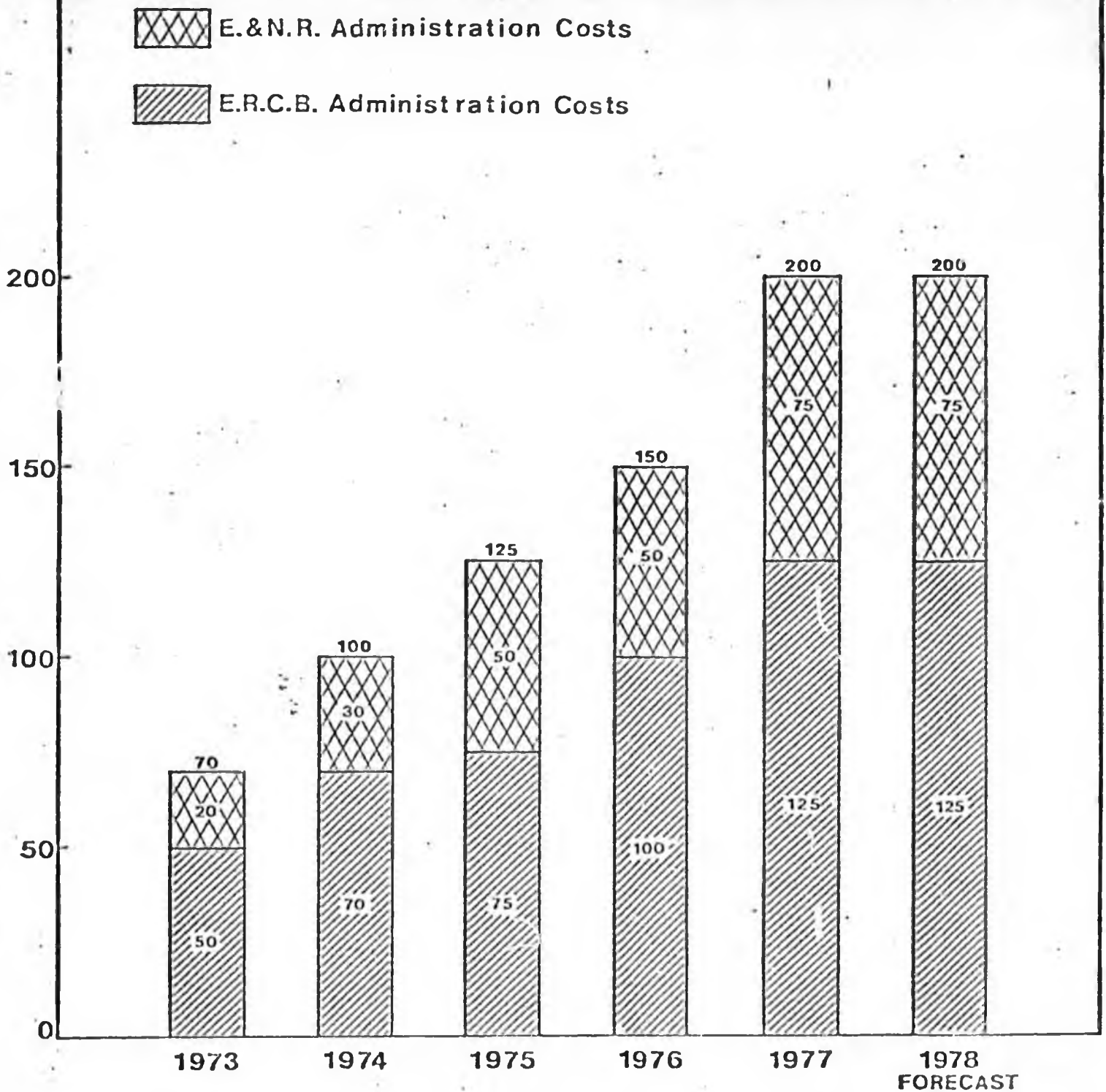
MILLIONS OF DOLLARS



INCENTIVE COST ASSOCIATED WITH SEISMIC ACTIVITY AND CASH REFUNDED

FIGURE 14

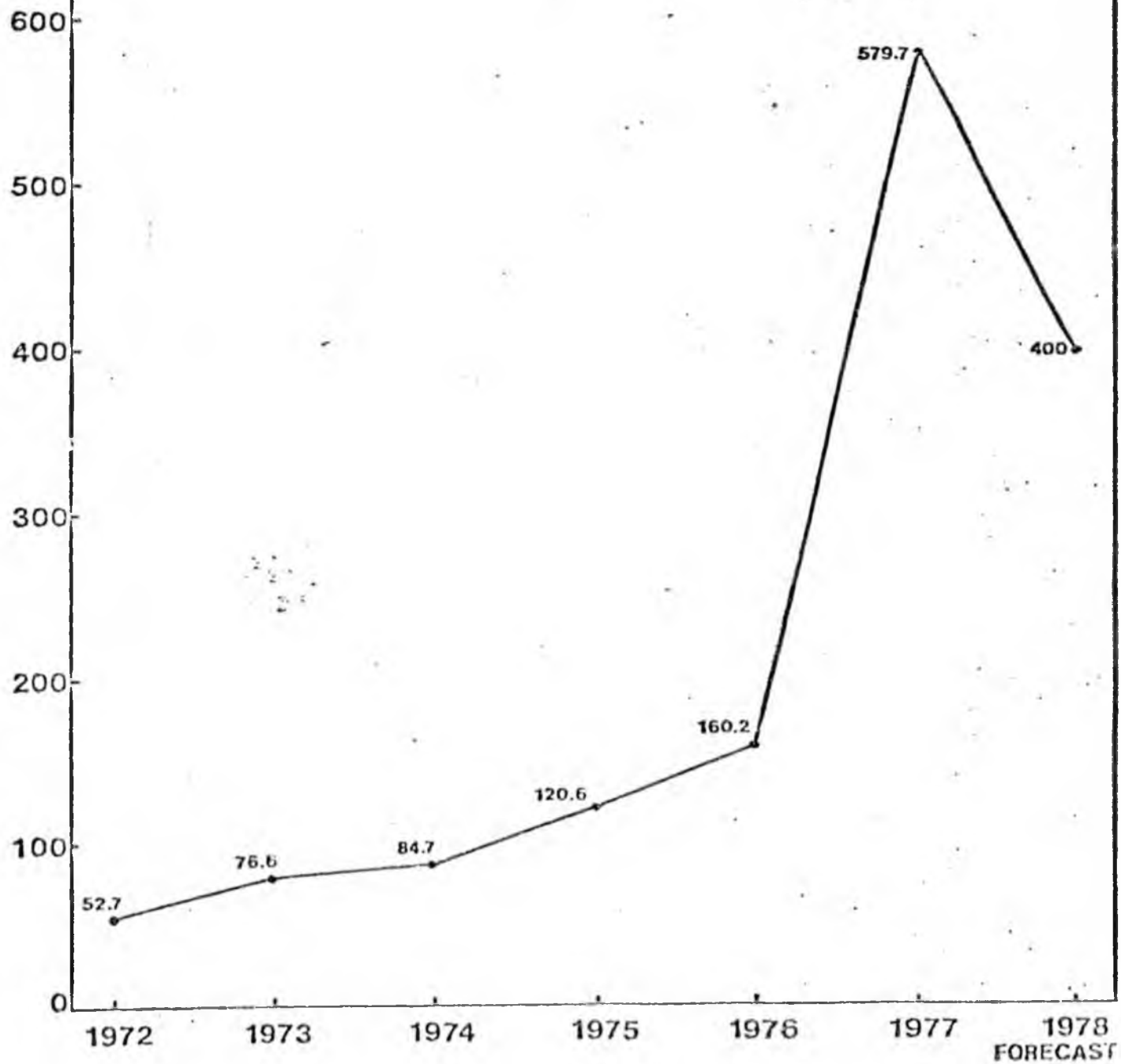
THOUSANDS OF DOLLARS



GOVERNMENT ADMINISTRATION COSTS ASSOCIATED WITH THE DRILLING AND GEOPHYSICAL INCENTIVE PROGRAMS

FIGURE 15

SALES (MILLIONS OF DOLLARS)



SALES OF CROWN OIL AND GAS MINERAL RIGHTS

FIGURE 16

Energy & Natural
Resources, June 1978

FIGURE 14

\$21.9 million was established as credit in 1977 for the Geophysical Incentive Program. This is an increase of more than 300% over the credit established in the first year the of the program. It is estimated that \$12 million will be established as credit in 1978.

The cash refunded has increased from \$1.9 million in 1975 to \$6.3 million in 1977. We believed that in 1978 cash refunds will total \$4 million.

FIGURE 15

In 1973, total administration costs were \$70,000 roughly \$50,000 for the ERCB and \$20,000 for the Department. In 1977, these figures had risen to about \$200,000 - \$125,000 for the ERCB and \$75,000 for the Department. It is expected that these figures will remain constant in 1978.

FIGURE 16

The revenue generated through sales of Crown oil and gas mineral rights has tripled from 1972 to 1976. During 1977 sales increased from \$160 million to \$579.7 million. The forecast for 1978 is 400 million.

We recognize three factors which may exist when exploration is supported by an incentive program.

- (a) The activity may have occurred even if it had not been supported by an incentive program.
- (b) The exploration activity was advanced to take advantage of the programs before their scheduled termination dates.
- (c) The activity may not be performed in the foreseeable future without incentive support.

The second and third considerations appear in the present situation to be applicable. The programs have been directly responsible for the discovery of large additional reserves and have encouraged high risk deep drilling in the foothills region.

Although the definite effects of the programs on exploration activity cannot be quantitatively assessed, the general trend has shown a considerable increase in exploration activity since inception of the programs.

THE PRECEDING PAGES WERE TREATED AS
A UNIT IN THE ORIGINAL FILE.

Wednesday, May 25, 1977, statement by Alaska Department of Fish and Game concerning:

Orca Inlet-Controller Bay
Critical Habitat Nomination
(Senate Bill No. 181)

The Alaska Department of Fish and Game strongly supports this bill. This area is probably the major shore bird/waterfowl migration/staging area in Alaska and possibly in North America. It encompasses tidelands and adjacent lowlands south and east of Cordova and of Hawkins Island, and also in the Copper River Delta and Controller Bay areas east and west of Katala.

Importance: During the spring migration period in excess of 20-million shore-birds (plovers, sandpipers, snipe, etc.) and an additional one-million waterfowl (ducks plus geese) utilize the food and water resources on these tidelands while waiting for the northern breeding grounds to open. This tremendous number of birds includes over 180 individual species. This resting period is extremely important to the migrating birds in permitting them to regain some of the fat reserves expended during the northward flight.

During the fall migration, depending on environmental factors, 10-20 million shore-birds, about one-million ducks and geese, and thousands of Sandhill cranes stop again at these tidelands, resting and feeding while preparing for the migration to their wintering grounds. These are located principally within the Pacific flyway, but also extend

throughout the United States, Mexico, South America, Australia, New Zealand, and the Hawaiian Islands.

In addition to this extensive use by migrating birds, some 50-100,000 shore-birds and waterfowl, hundreds of thousands of sea-birds, hundreds of bald eagles, and many other birds utilize the area throughout this spring-fall period. In total, 219 species have been recorded in the region: 72 occur in the tens of thousands, 10 in the millions.

National Significance: This habitat is one of the most important shore-bird migration/staging areas in North America. It also provides the nesting, molting, and feeding habitat for the largest known concentration of Trumpeter Swans in North America, nearly the entire world's population of Dusky Canada Geese, and large numbers of bald eagles.

Rationale for this Critical Habitat Designation: The preceding discussion outlines well the extensive use of this region as a breeding, resting, and staging area by countless numbers of various species of waterbirds and shorebirds. Many of these (e.g. the ducks and geese, et al.) provide exceptional recreational opportunity for both consumptive (hunters) and non-consumptive (bird watchers) users. More importantly, however, it is a key area for the migration of a major portion of Alaska's waterbird populations by providing a valuable rest stop for the "energy refueling" necessary to sustain long migrational flights. The major responsibility of the Alaska Department of Fish and Game is to manage and sustain Alaska's fish and wildlife resources for the enjoyment and use of all Alaskans, and in fact of all Americans. A "critical habitat" designation for this area will demonstrate the State's concern for such resources and will help control unrestrictive use that could be detrimental to these vast bird populations. The designation is not prohibitive of other uses, but does direct attention and consideration to all resources and does help provide for rational "development" planning by the State.

Public Support: The designation of this area as a "critical habitat" has received strong support from the Alaska Waterfowl Association, the Alaska Conservation Society, conservationists generally, and numerous members of the public at large, especially waterfowl hunters and bird watchers. A public hearing was held by the Alaska Department of Fish and Game in Cordova on February 26, 1976, and there was general strong support. Recommendations from that meeting resulted in the deletion of certain areas proposed and the addition of others.

Possible Problems: The Department of Natural Resources has indicated that there is low hydrocarbon potential in the Orca Inlet portion of the area, but better potential elsewhere in the area for both oil and gas. That kind of development could be detrimental, but need not if properly planned. There is nothing in the current statutes that prohibits mining or oil and gas development or other development from occurring within designated "critical habitats".

Permitting Requirements: As indicated on the following page, Alaska Statute 16.20.260 requires that any person or organization contemplating "use" or "construction work" on a "critical habitat" obtain the written approval of the Commissioner of the Alaska Department of Fish and Game.

Statute Authority: Pertinent language of the Alaska Statutes, Title 16, Article 5, are restated here for your information.

Article 5. Fish and Game Critical Habitat Areas

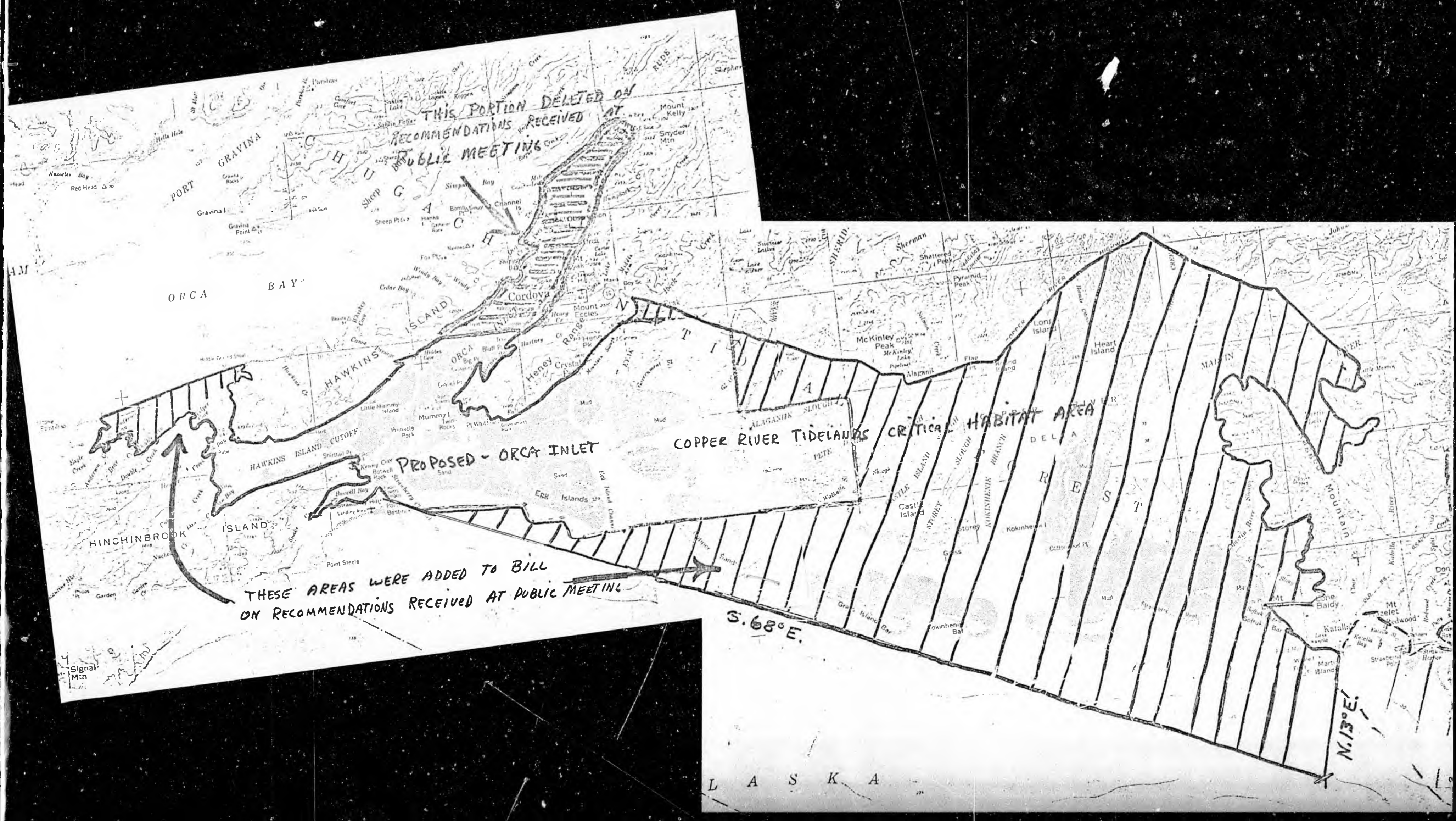
Sec. 16.20.220. Purpose. The purpose of §§ 220-270 of this chapter is to protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose.

Sec. 16.20.240. Regulations. The board shall promulgate regulations it considers advisable for conservation and protection purposes governing the taking of fish and game in state fish and game critical habitat areas.

Sec. 16.20.250. Multiple land use. Before the use, lease or other disposal of land under private ownership or state jurisdiction and control, within state fish and game critical habitat areas created under this chapter, the period or responsible state department or agency shall notify the commissioner of fish and game. The commissioner shall acknowledge receipt of notice by return mail.

Sec. 16.20.260. Submission of plans and specifications. When the board so determines, it shall instruct the commissioner, in the letter of acknowledgement, to require the person or governmental agency to submit full plans for the anticipated use, full plans and specifications of proposed construction work, complete plans and specifications for the proper protection of fish and game, and the approximate date when the construction or work is to commence, and shall require the person or governmental agency to obtain the written approval of the commissioner as to the sufficiency of the plans or specifications before construction is commenced.

Sec. 16.20.270. Additional critical habitat areas. The commissioner shall submit a list of additional critical habitat areas to the legislature annually.



THIS PORTION DELETED ON
RECOMMENDATIONS RECEIVED AT
PUBLIC MEETING

THESE AREAS WERE ADDED TO BILL
ON RECOMMENDATIONS RECEIVED AT PUBLIC MEETING

S. 68° E.

N. 13° E.

ALASKA

PORT GRAVINA

ORCA BAY

HAWKINS ISLAND

Cordova

HINCHINBROOK ISLAND

COPPER RIVER TIDELANDS

CRITICAL HABITAT AREA

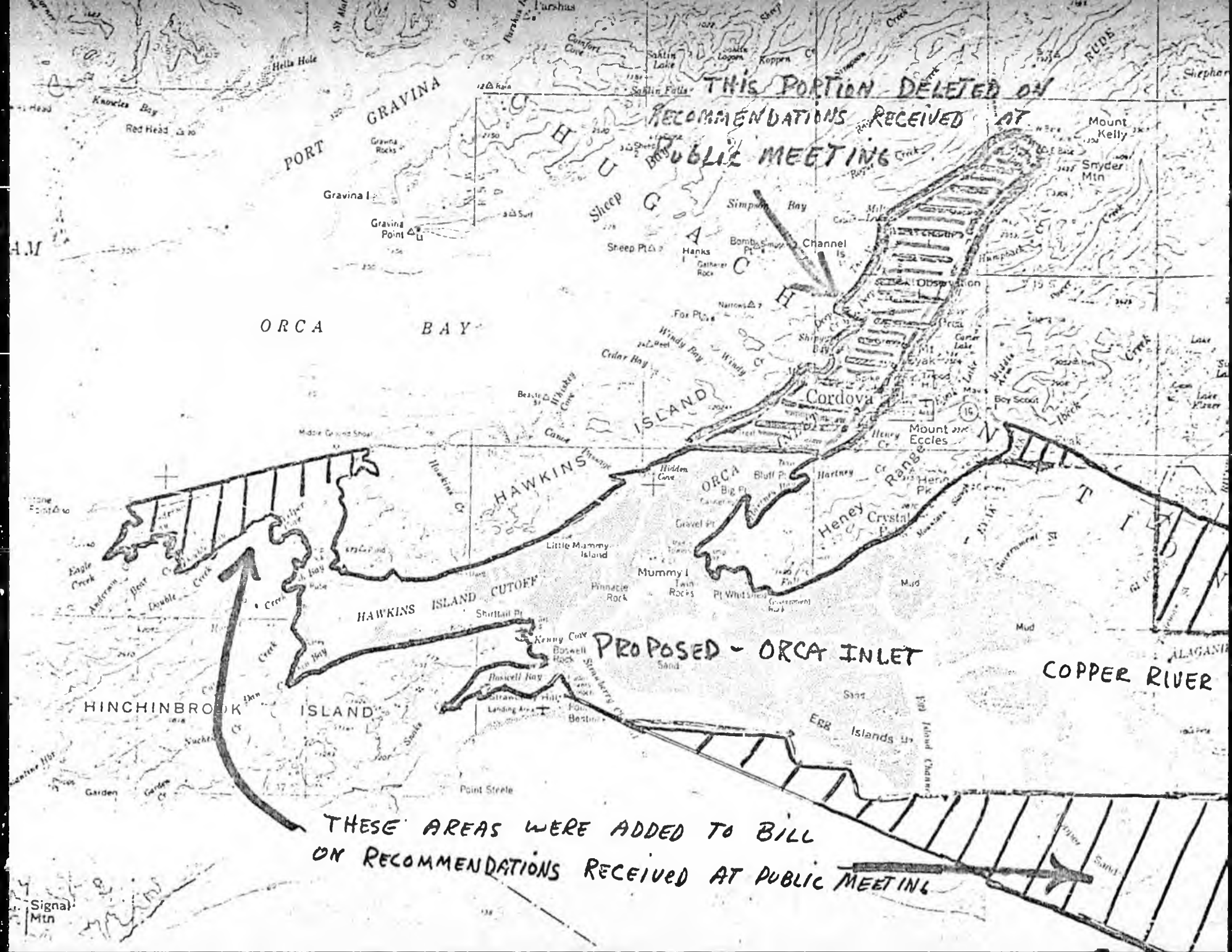
DELTA

RIVER

EST

MAIN

Mountain



THIS PORTION DELETED ON
RECOMMENDATIONS RECEIVED AT
PUBLIC MEETING

PROPOSED - ORCA INLET

THESE AREAS WERE ADDED TO BILL
ON RECOMMENDATIONS RECEIVED AT PUBLIC MEETING

ORCA BAY

COPPER RIVER

PORT GRAVINA

SHEEP BAY

HAWKINS ISLAND

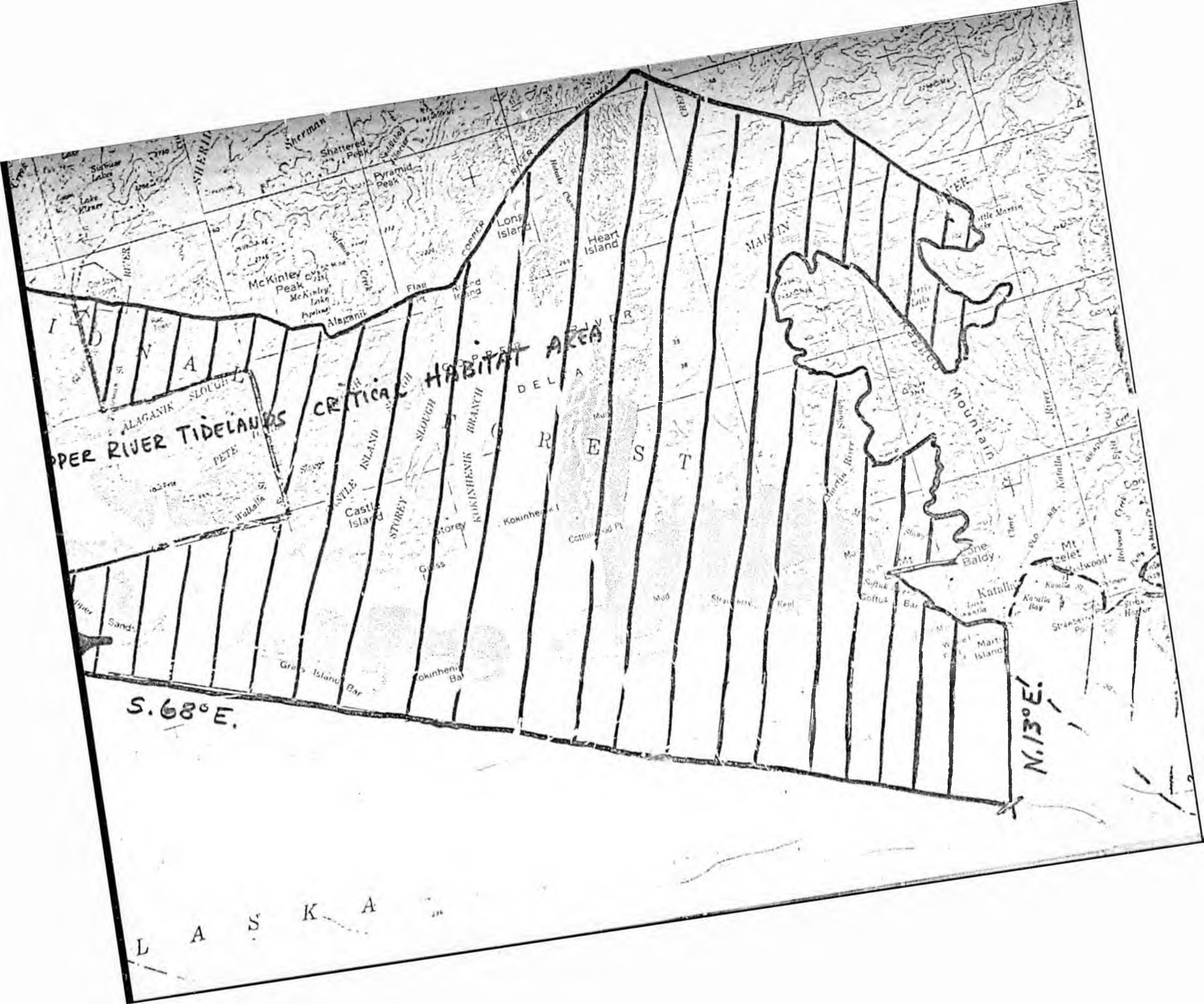
HINCHINBROOK ISLAND

HAWKINS ISLAND CUTOFF

ORCA RANGE

A.M

Signal Mtn



UPPER RIVER TIDELANDS

CRITICAL HABITAT AREA

DELA REST

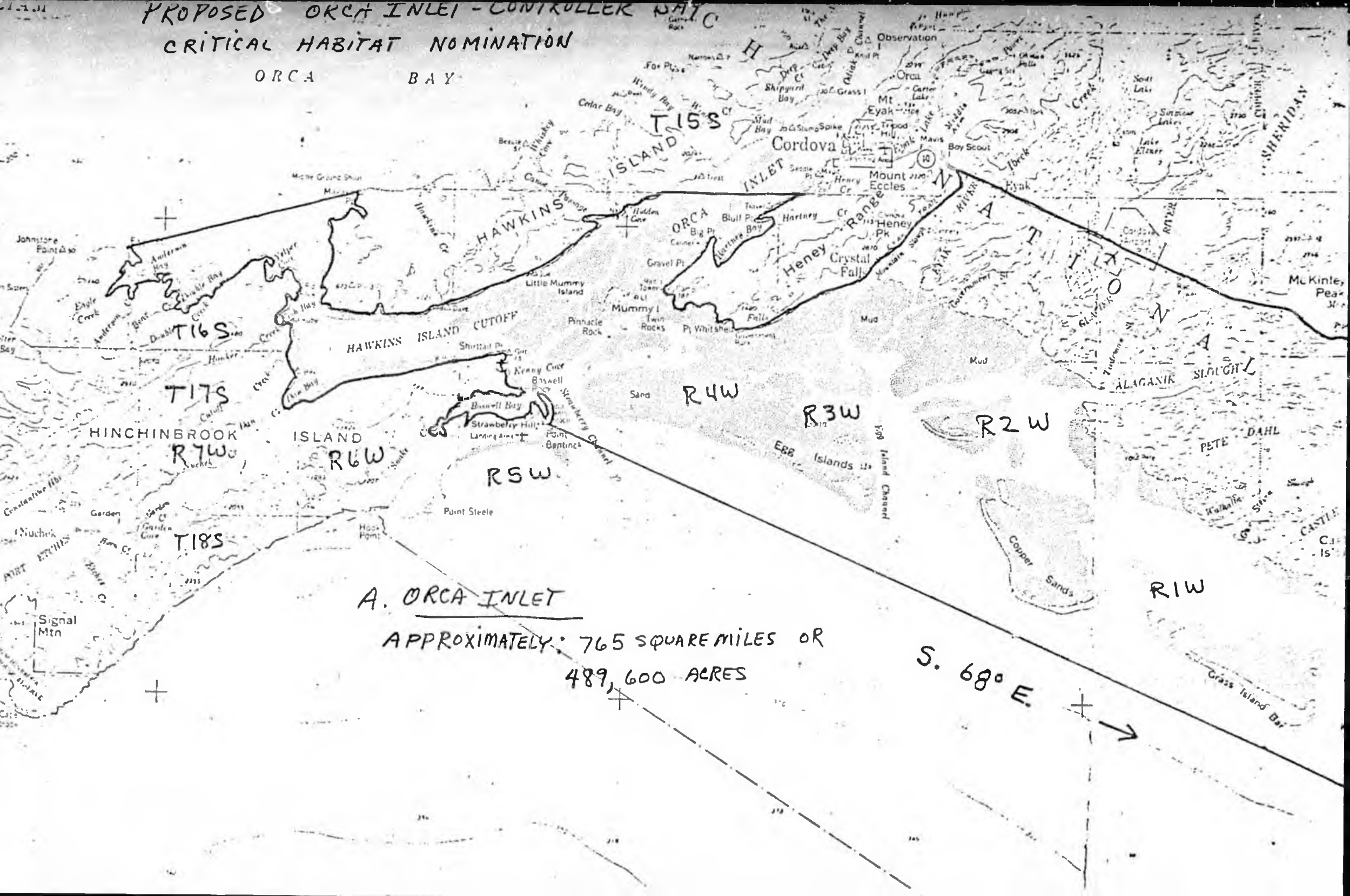
S. 68° E.

N. 13° E.

L A S K A

PROPOSED ORCA INLET-CONTROLLER NATC
CRITICAL HABITAT NOMINATION

ORCA BAY



A. ORCA INLET

APPROXIMATELY: 765 SQUARE MILES OR
489,600 ACRES

S. 68° E. →