SHEEP DISTRIBUTION AND ABUNDANCE ALONG THE PROPOSED DEMPSTER LATERAL PIPELINE ROUTE

DECEMBER, 1978 - PROGRESS REPORT

MANFRED HOEFS
YUKON GAME BRANCH

The Yukon Game Branch carried out big game inventory work in Game Management Zone 2 (D. Low's and P. Jensen's outfitting areas) during July, 1978. A cooperative sheep study, between the Yukon Game Branch and the Federal Department of Northern Affairs - Roads and Airstrips Division - was concurrently carried out in the Richardson Mountains (G.M.Z. 1). Because of potential adverse effects of a proposed pipeline route through the area, Foothills Pipeline Company agreed to cooperate with these studies by providing financial assistance. Foothills' contribution will be $15,000.00, of which $10,000.00 was spent for summer inventories along a corridor of about ten miles on each side of the proposed pipeline route, which is the subject of this report. A final report to Foothills will be submitted after two more surveys have been conducted, with the goal to locate winter ranges and lambing areas in the transportation corridor

Our summer surveys and interviews with many biologists and other reliable observers in the area reveal that there are four areas within the corridor where sheep come into very close contact with the proposed pipeline route. The division of these potential problem areas into four is arbitrary at this time, even though an attempt has been made to consider assumed population ranges, varying densities and distinct physiographic boundaries.

These four tentative problem areas are located along the proposed pipeline route at the following mile posts (pipeline mile posts).

.../2

Sheep Range #1	:	Miles 360 to 377	(Richardson Mountains)
Sheep Range #2	:	Miles 553 to 573	(Northern Ogilvie Mountains)
Sheep Range #3	:	Miles 573 to 597	(Central Ogilvie Mountains)
Sheep Range #4	:	Miles 655 to 677	(Southern Ogilvie Mountains)

For each of these areas a brief discussion is presented, which lists the result of our summer surveys as well as reliable eyewitness reports on sheep observation. No attempt is made at this time to come up with any conclusion or to make recommendation with regard to pipeline route or construction schedules. This will be done after the winter survey and the lambing areas evaluations have been carried out. However, no further work in the Richardson Mountains problem area (Sheep Range #1) is necessary to recommend already at this time, that the initial routing proposed by Foothills, which had the pipeline parallel the Dempster Highway at a distance of about six to ten miles in this area, is the preferred choice, since it would remove any possibility of adverse effects on the local sheep population.

This progress report also itemizes the expenditure for this project to date.

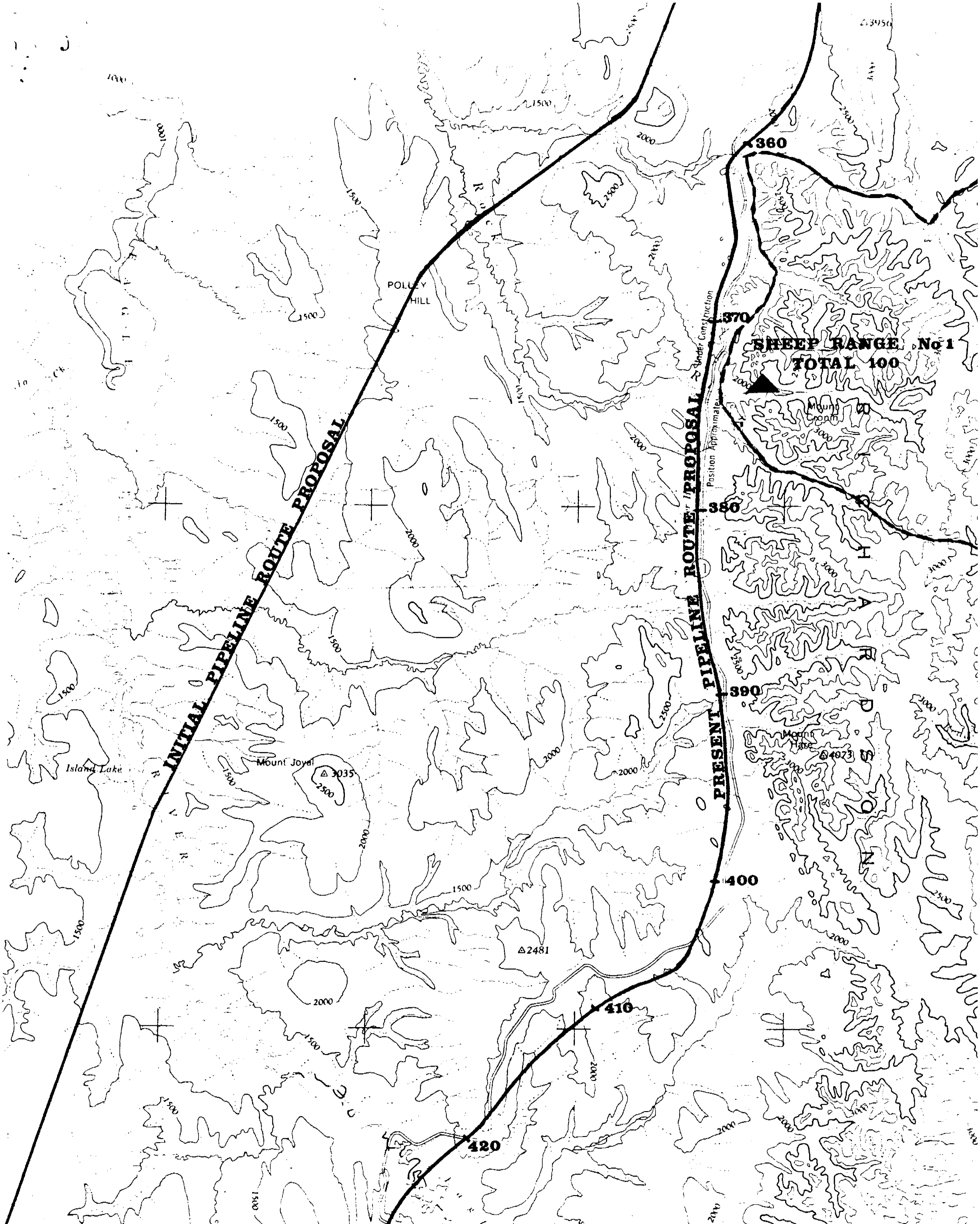
Attached are three maps showing the potential problem areas as well as correspondence revealing the terms of reference for this joint project.

SHEEP RANGE #1:

Location: Richardson Mountains, between pipe line mile 360 in the north and 377 in the south, along the east side of the pipe line. Sheep range appears to be limited to the east side of the route, since no high mountains are found on the west side of the pipe line route in this location. However, there are some small, suitable hills which could be used since much of this entire area is above timberline, but there is no evidence so far of sheep crossing the road.

Critical areas: Work on this population has been limited to the summer season. One mineral lick and potential lambing area has been identified along the Rock River about 2 miles east of the Dempster Highway. Limited information indicates that some wintering areas are also located close to the Dempster Highway, since several sheep were shot by a native person from McPherson during the winter 1977-78 about 2 miles east of the Dempster Highway, near pipe line mile 360. Throughout the summer sheep range to within 2 miles of the road and can often be seen from the road.

Population size: A number of surveys have been carried out on this population in 1978 as well as in 1977. It is known that the maximum number of sheep in this herd, immediately after the lambing season, is 80 to 95 while the population size in late winter is around 60 to 70. These surveys have revealed an imbalanced sex ratio favouring nursery bands. This lack of rams may indicate that our knowledge of the total range of this population is incomplete, or that illegal hunting for rams takes place. It is known that these sheep are occasionally hunted by Indians from Fort McPherson concurrently with caribou hunts, but so far it was assumed that their hunting was "meat hunting" - indiscriminate of sex and age and therefore not likely to upset the natural sex ratio in the population. Population statistics for this population as well as concerns with regard to potential adverse effects on this herd by the Dempster Highway are found in Hoefs 1978 a, b.



INITIAL PIPELINE ROUTE PROPOSAL
PRESENT PIPELINE ROUTE PROPOSAL
SHEEP RANGE No 1
TOTAL 100
360
370
380
390
400
410
420
POLLEY HILL
Island Lake
Mount Joyal
3035
2481
Mount Hale
4073
Position Approximate
Under Construction

SHEEP RANGE #2:

Location: Northern Ogilvie Mountains, between pipe line mile 553 in the north and 573 (Ogilvie bridge) in the south, on both sides of the pipe line route and Dempster Highway. This is a low density sheep range, and observations are irregular and unpredictable as far as times and locations go. However, they have been observed on both sides of the transportation route and are known to cross it.

Critical areas: The term "critical area" is not appropriate here since mineral licks, lambing areas or regularly used summer or winter ranges are unknown at present. The following is a summary of sheep observations made in this area, the numbers corresponde to locations on the map attached to this report.

(1) 1 ewe 1 lamb (survey July 13/78 - Larsen-Hoefs)
(2) 1 ram swam Ogilvie River near Churchward Hill in October 1978 (D. Drummond, Conservation Officer, Dawson)
(3) 2 rams (survey July 14/78 - Hoefs, Larsen)
(4) 2 rams crossed river and road during caribou migration and were shot by hunters from the road (late October 1975)- Hoefs, Sinclair
(5) 7 ewes, 1 yearling 2 lambs observed during falcon survey on July 22/77 by Wayne Nelson and M. Hoefs.
(6) 2 sheep (unclassified) crossed river and road near road mile 124.5 on August 6, 1978 (Wayne Nelson)
(7) Sid Carr, former lodgeowner of "Ogilvie Lodge", pipe line mile 573, saw one ram on mountain northwest of bridge repeatedly during the winter of 1974/75
(8) 1 ram observed on west side of pipe line route (mile 568) on October 20, 1978, by Rick Farnell.

Population size: The total population size of this area (survey units A, D in Larsen, 1978) is estimated at not more than 25 to 30 sheep (Larsen, 1978). It must be pointed out thought, that the use of the Ogilvie River as a boundary was arbitrary and may be unrealistic. A sheep population, with a greater density, is found immediately south of the river (Range #3), and exchange between these two populations is likely.

SHEEP RANGE #3:

Location: Central Ogilvie Mountains, between pipe line mile 573 (Ogilvie bridge) in the north and mile 597 in the south. Sheep have been observed on both sides of the transportation corridor and crossing in spring and summer appear to be regular events. Winter observations are limited.

Critical areas: Critical areas appear to be highway miles 115 to 117 and 112 to 114. A much used mineral lick is located along Engineer Creek near highway mile 117 (see attached memo by Conservation Officer D. Drummond). The following are eye-witness reports of sheep crossing the transportation corridor in this area, or of sheep using the mineral lick along Engineer Creek.

Mile 115 - 116, John MacDonald saw and photographed 3 sheep coming down the Dempster Highway in June 1977.

Mile 117, Tony Nette saw and photographed 5 sheep using mineral lick in June 1978.

Dan Drummond, Conservation Officer in Dawson, filed the following 4 reports:

Mile 116 (east side) - 6 sheep (2♂ 4♀ 2 lambs) Sept. 18, 1976.

Mile 117 (on the road)- 2 rams on November 7, 1976.

Mile 116 (east side) - 3 ewes on June 7, 1978.

Mile 117 (east side) - 7 rams in late July, 1978.

Sharon Russell and Janet MacDonald made the following observations:

Mile 113.5 (on road) - 1♂ 1♀ 2 yearlings on May 28, 1978.

Mile 116 (east side) - 3♂ 1♂ 1 yrl. and 4 unclassified sheep on May 28, 1978.

The writer made the following observations earlier this summer:

Mile 116 (east side) - 5 ewes and lambs on June 16, 1978.

Mile 117 (east side) - 15 sheep (3♂ 6♀ 2 yrl. 2 lambs 2 unclassified) on June 18, 1978.

Observations so far indicate that the lick area is primarily used in May and June. However, the occasional observation of sheep near

the road in the fall may indicate that they want to use the lick or cross the road even at that time of the year, but that possibly hunting has prevented this and has essentially stopped lick use in the fall.

Population size: Detailed surveys were carried out by the Yukon Game Branch in this area on July 16, 1978. The following sheep observations were made within the 20 mile pipe line corridor, the numbers corresponde to locations on the map attached.

(1) 9♀ yrl and 2 lambs
(2) 2♂
(3) 1♀ 1 yrl
(4) 6♀ 3 lambs
(5) 3♀ 2 lambs
(6) 1♂
(7) 2♂
(8) 4♀ 1 lamb
(9) 2♂

Larsen (1978) estimates the total number of sheep in this population (survey unit C) at about 55.

SHEEP RANGE #4:

Location: Southern Ogilvie Mountains, between pipe line mile 655 in the north and 677 in the south, on both sides of the transportation corridor. In this location the transportation corridor bisects the densest sheep population and the best sheep habitat over its entire length. Sheep ranges are found on both sides of the corridor and sheep migrations across it are most likely annual events.

Critical areas: Limited information indicates that the mountain range on the north side of "North Fork Pass" (pipe line mile 668 to 673) is an important lambing area and perhaps also a winter range. Additional winter range is located along the West Hart Road on its north side. Up to 20 sheep have also been observed on the west side of the corridor between pipe line miles 660 and 667 in October and November. It is not known whether this area is used all winter long. We have the following eyewitness reports of sheep crossing the corridor in this area. Rick Martell saw 3 sheep (2♀ 1 lamb) cross the road near North Fork Pass, pipe line mile 672, on August 19, 1978.

Dan Drummond reported the following two observations: Highway mile 52 - 2 rams crossing the road west to east on November 10, 1976, and 11 sheep (ewes and lambs) crossing the road (Mile 53) from west to east on October 2, 1976. Additional, yet unconfirmed, observation of sheep crossings have been reported by tourists travelling the highway.

Population size: Detailed surveys carried out by the Yukon Game Branch in this area took place on July 26, 1978. The following observations were made within the 20 mile pipe line corridor, the numbers correspond to locations marked on the map attached.

a) east side of transportation corridor:

(1) 1♀

(2) 2♂ 3♀ 1 yrl

(3) 2♂

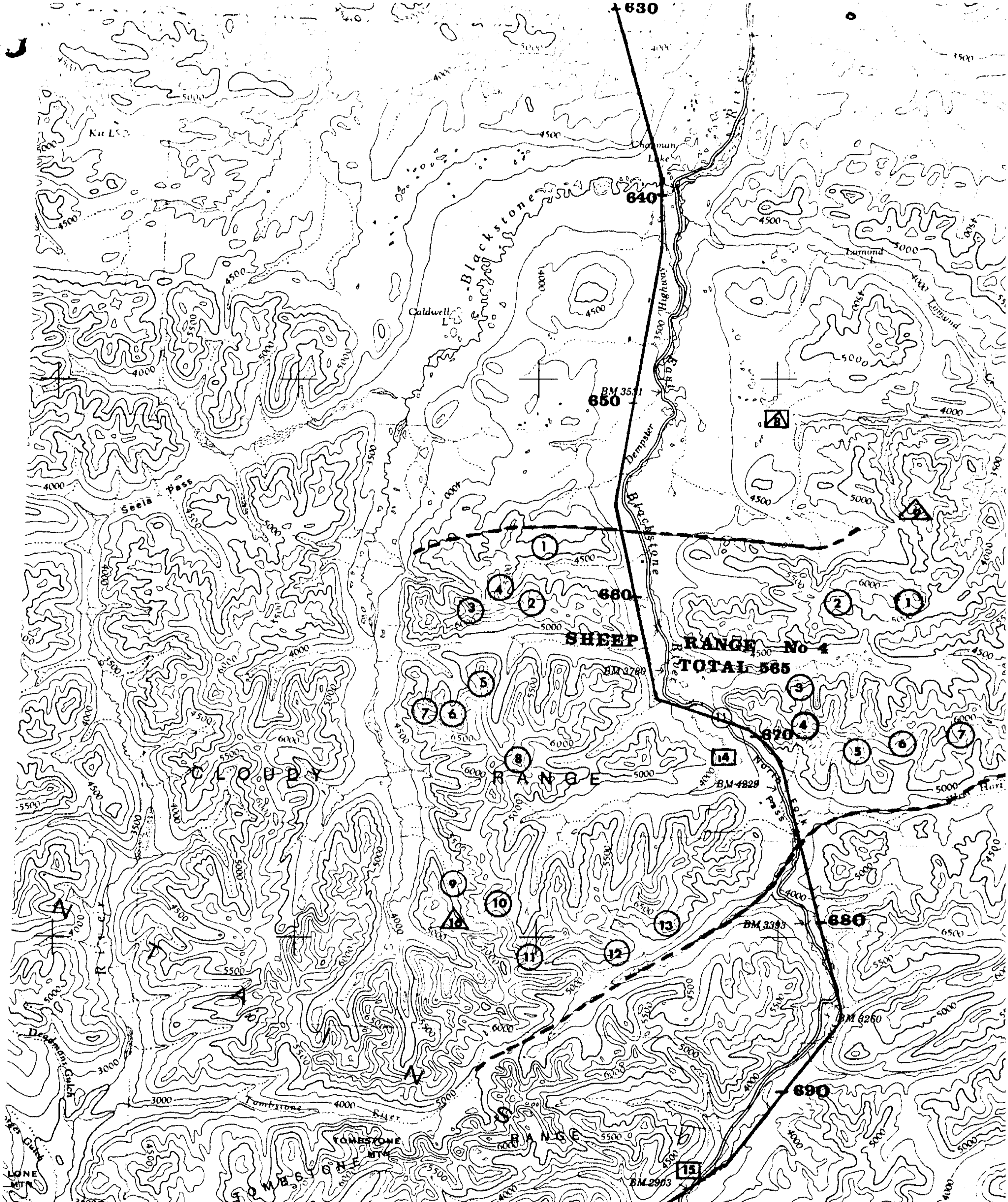
(4) 7♀ 2 yrl 1♂

(5) 25♀ 9 lambs
(6) 4♂ 52♀ 5 yrls 12 lambs
(7) 6♀ 3 lambs
(8) 1 grizzly 1 ♀ moose
(9) 1 wolf

b) <u>west side of transportation corridor</u>:

(1) 2♀ 1 yrl
(2) 6♀ 2 yrl
(3) 1♂
(4) 5♀ 2 yrl 1 lamb
(5) 19♀ 3 yrl 4 lambs 4♂
(6) 1♀ 1 yrl
(7) 48♀ 6 yrl 7 lambs 2♂
(8) 18♀ 7 yrl 4 lambs
(9) 55♀ 15 yrl 11 lambs 3♂
(10) 5♂
(11) 5♂
(12) 1♂
(13) 1♂
(14) 1 moose (♂)
(15) 1 moose (♂)
(16) 1 grizzly

The total population size in this area (survey units L and M) is estimated at 560 to 580 (Larsen, 1978).


630
640
650
660
670
680
690
700
Chapman Lake
Blackstone
Caldwell L
Lomond L
Dempster Highway
East Blackstone River
BM 3531
Seela Pass
SHEEP RANGE No 4
TOTAL 565
BM 3780
BM 4229
North Fork Pass
CLOUDY RANGE
BM 3393
BM 3260
Deadmans Gulch
Tombstone River
TOMBSTONE MTN
TOMBSTONE RANGE
BM 2903
LONE MTN