Interim Report

STATUS AND PRELIMINARY FINDINGS OF 1980 AERIAL SURVEYS OF SPRING WATERFOWL CONCENTRATION AREAS ALONG THE ALASKAN GAS PIPELINE ROUTE, TETLIN JUNCTION TO PUMP STATION NO.3. (OFI-80-16285660)

Submitted to:

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Aerial surveys of spring waterfowl concentration areas along the proposed gas pipeline corridor were initiated 30 April 1980 and will continue through 10 June 1980, as specified in Contract No. OFI-80-16285660. The following interim report is a documentation of surveys to date and a tabulation of data gathered, including:

1) descriptions of wetland areas routinely surveyed,
2) and a summary and description of waterbird concentrations.

This report is meant to transmit data collected to date; any conclusions or analyses may reflect its incomplete nature.

STUDY AREA

The study area is that section of the proposed gas pipeline corridor extending from Tetlin Junction (M.P. 737) to Pump Station No. 3 (M.P. 109). Specifically, the study area includes wetland and waterfowl habitats within three miles of the present alignment's centerline. These habitats will be described further in Results: Wetland Habitats Surveyed.

METHODS

A Cessna 185 flown at approximately 500', was employed to locate suspected waterfowl concentration areas as well as document others in the study area, between 30 April and 3 May 1980. Following this identification routine aerial surveys at intervals of four to six days have been made in a Cessna 185 or Super Helio Courier. Two observers (Dick Sellers, ADFG, Anchorage, and Bob Ritchie, ABR, until 10 May, and Jim Hawkins, ABR, and Bob Ritchie through 10 June) have described habitat types, environmental conditions (ie., ice cover), and flock characteristics, such as numbers and composition. Waterfowl reactions to survey aircraft have also been noted. Appendix 1 is a blank data form.

Systematic overflights (100'-200') of major waterbodies, marshes and floodplains within wetland units have been made as weather permits. Most of these areas, by nature of their geography, allow duplicable transects. Appendix 2 summarizes survey routes to date.

RESULTS

Wetland Areas Surveyed

Thirty-two wetland areas have been identified in the study area. Delineation of these sections as discrete units was determined by differences in environmental characteristics and location. However the major purpose at this time is to facilitate the review of information (see Fig. 1a and 1b).

Table 1 describes the location of these wetlands, general habitats present, and a qualitative appraisal of their value to spring migrants to date. Future discussions will conform to the classification system employed by biologists involved with Terrestrial Habitat Evaluation projects.

Besides those areas listed above other habitats have been scrutinized for migratory bird use. These areas include buried portions of the oil pipeline, gravel pits and river floodplains. Their value will be discussed in the final report.

Waterbird Concentrations

Spring migration in the interior of Alaska was well underway when surveys were begun 30 April. Open water, exposed river bars, and revegetated areas were available to early migrants as far north as the Dietrich River Valley. However with the exception of birds at the Ray River mouth and in the Olsen Lakes area few migrants were recorded north of the Tolovana River. Chandalar north was 95-100 percent ice covered.

Appendix 3 describes ice conditions and estimated numbers of birds for each wetland area surveyed. Large concentrations (>500) were recorded at eight areas: Moon Lake (2), Cathedral Bluffs (3), Sam Creek-Dot Lake (6), OHM Ponds (13), Shaw Creek Flats (15), Ray River (1N), Galbraith Lake (6N) and Pump Station No. 3 (8N).

Three species of geese, six dabbling ducks and at least one species of swan, merganser and seven diving ducks, as well as sandhill cranes, loons, grebes and shorebirds have been recorded on surveys. Species and numbers have been tabulated in Appendix 4 for four general geographic areas:

1) Tetlin Junction to Big Delta (Sections 1-13)
2) Big Delta to the Yukon River (Sections 14-26)
3) Yukon River to Atigun Pass (Sections 1N-5N)
4) Atigun Pass to Pump Station No. 3 (Sections 6N-8N).

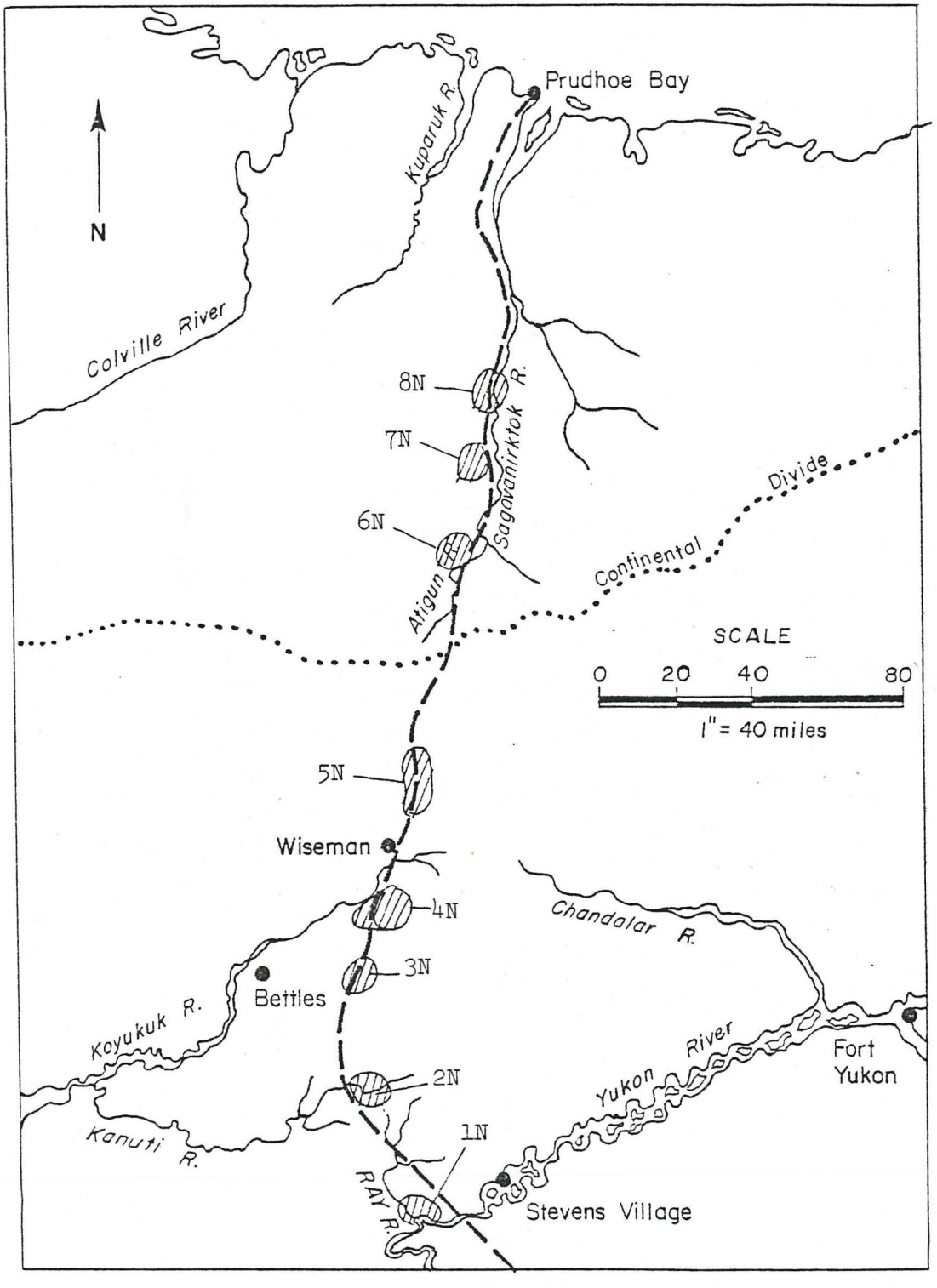


Figure 1a. Northern wetland survey areas (keyed to Table 1).

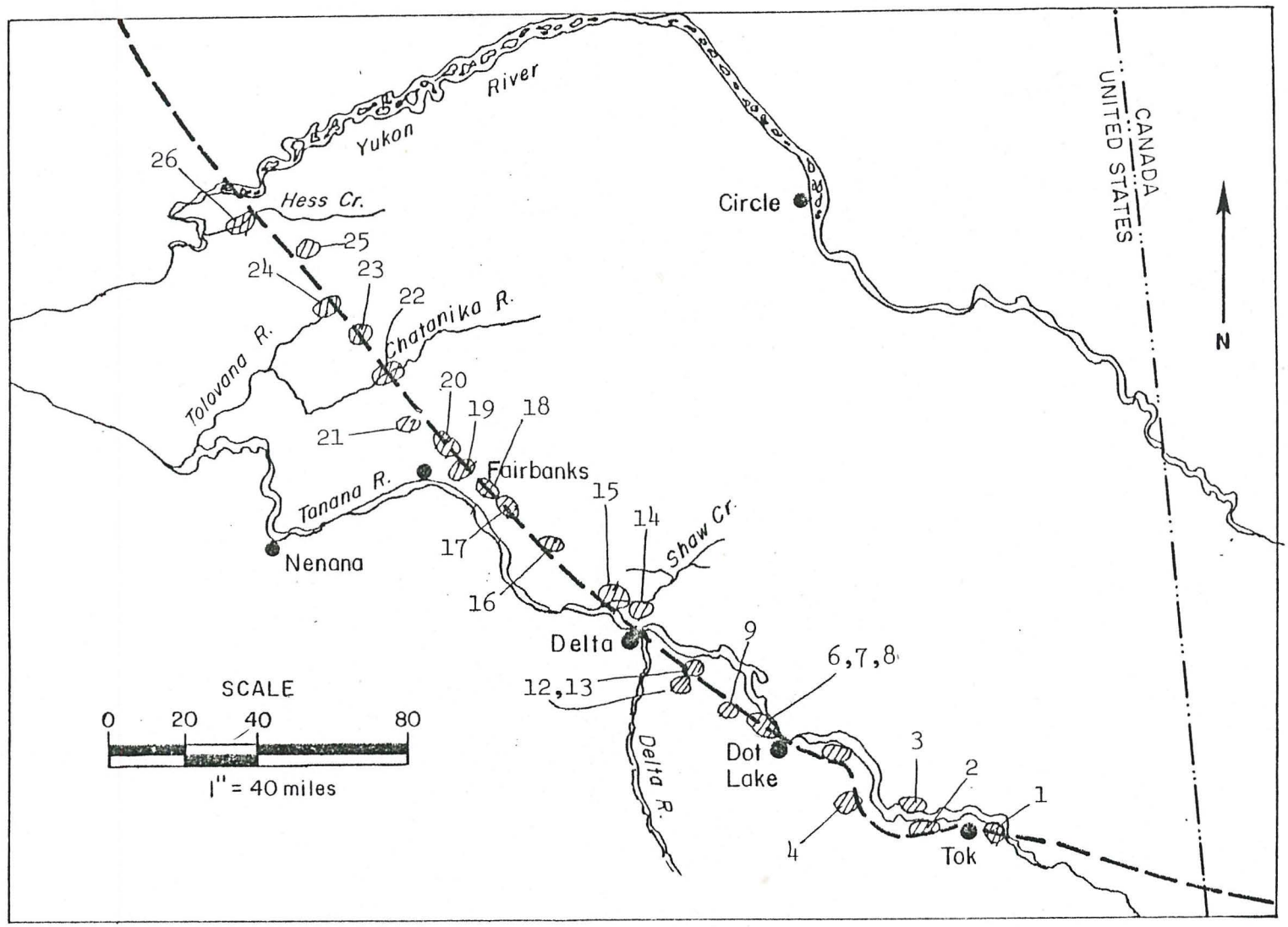


Figure 1b. Southern wetland survey areas (keyed to Table 1).

TABLE 1. Wetland-Waterfowl Survey Areas along the Proposed Gas Pipeline Corridor, Tetlin Junction to Pump Station No. 3.

No.	Geographic and M.P. Location	Principal Habitats	Spring Bird Use[1] (main groups) Peak Number/ Date
1	Tetlin Junction, M.P. 736	ephemeral ponds	light (da)
2	Moon Lake, M.P. 635-638	ponds and lakes	heavy (da, di), 631-15 May
3	Cathedral Bluffs, M.P. 632-634	ponds and marsh	heavy (da), 530-3 May
4	Robertson River, M.P. 624	kettle ponds and lakes	light (da, di)
5	Bear-Chief Cks, M.P. 610	creek and ponds	moderate (da, ge), 189-6 May
6	Dot Lake-Sam Ck, M.P. 600-608	lake, creeks, marsh	moderate (da, ge, sh, sw), 537-15 May
7	Johnson Slough, M.P. 594-598	lakes, river banks	light (da, ge)
8	Dry Lake, M.P. 592-594	ephemeral ponds	heavy (da, ge, sh, cr), 335-3 May
9	Johnson River Lakes, M.P. 587	ponds and lakes	light (da, di)
12	Greely Lakes, M.P. 555	ponds and lakes	light (da, di, ge, sw)
13	OHM Ponds, M.P. 550-555	ponds, lakes, fields	heavy (da, ge, cr), 11519-6 May
14	Quartz-Lost Lakes, M.P. 535	ponds and lakes	moderate (da, di), 490-30 April
15	Shaw Ck. Flats, M.P. 527-532	ponds, lake, marsh	moderate (da, di), 521-14 May
16	Salcha Crossing, M.P. 503-506	oxbow lakes	light (da)
17	French Creek, M.P. 487-496	creek, ponds	light (da, di)
18	Moose Creek, M.P. 479-487	creek, gravel pits	light (da, di)

TABLE 1. continued.

No.	Geographic and M.P. Location	Principal Habitats	Spring Bird Use[1] (main groups)[2], PEAK NUMBER/DATE
19	Chena Floodplains, M.P. 478	gravel pits, planted	moderate (da, di, ge), 360-30 Apr
20	Chena Crossing, M.P. 465-472	creek, ponds	light (da, di)
21	Goldstream Lakes, M.P. 457	ponds	light (da, ge)
22	Chatanika Wetlands, M.P. 444	oxbow ponds, lakes	moderate (da, di), 250-10 May
23	Tatalina Wetlands, M.P. 419	ponds, marsh	light (da)
24	Tolovana Wetlands, M.P. 405	marsh, lakes	moderate (da, di), 328-7 May
25	Erickson Ck, M.P. 390	ponds, lakes	light (da, di)
26	Hess Ck, M.P. 385	oxbows, river bars	light (da, di, ge)
1N	Ray River, M.P. 358-361	oxbows, river bars, lakes	heavy (da, di, ge), 1079-10 May
2N	Olsen Lakes, M.P. 311-314	ponds, lakes, tundra	moderate (da, di, ge), 225-13 May
3N	Grayling Lake, M.P. 268-270	lakes, ponds	light (di)
4N	Cathedral Mtn, M.P. 254-258	lakes	moderate (da, di), 402-13 May
5N	Dietrich Valley, M.P. 195-213	lakes, gravel pits	light (da, di)
6N	Galbraith-Tee Lakes, M.P. 142-51	lakes, tundra	heavy (ge, da), 703-13 May
7N	Toolik River, M.P. 119-128	creek, tundra, ponds	moderate (ge, da), 315-13 May
8N	Pump Station No. 3, M.P. 109	ponds, tundra	heavy (ge, da), 1040-13 May

[1] terms such as moderate or heavy reflect impressions of the authors; they are generally meant to rank wetlands in this area.

[2] da = dabbler, di = diver, sw = swan, ge = geese, sh = shorebird, cr = crane

NORTHEST WATERBIRD SURVEY Section_____

Date_____ Time_____ Survey_____

Survey Conditions _____ Ice Cover_____

Habitat Description_____ Photo # _____

APPENDIX 1. DATA FORM.

Swans				
Geese				
Canada				
White-fr.				
Dabbler				
Pintail				
Mallard				
Wigeon				
Shoveler				
G.W. Teal				
Diver				
Scaup				
Goldeneye				
Canvasback				
Bufflehead				
Redhead				
W.W. Scoter				
Merganser				
S. Crane				
Loon				
Gull				
Shorebird				

Waterfowl Reactions to Survey: _____

_____

_____

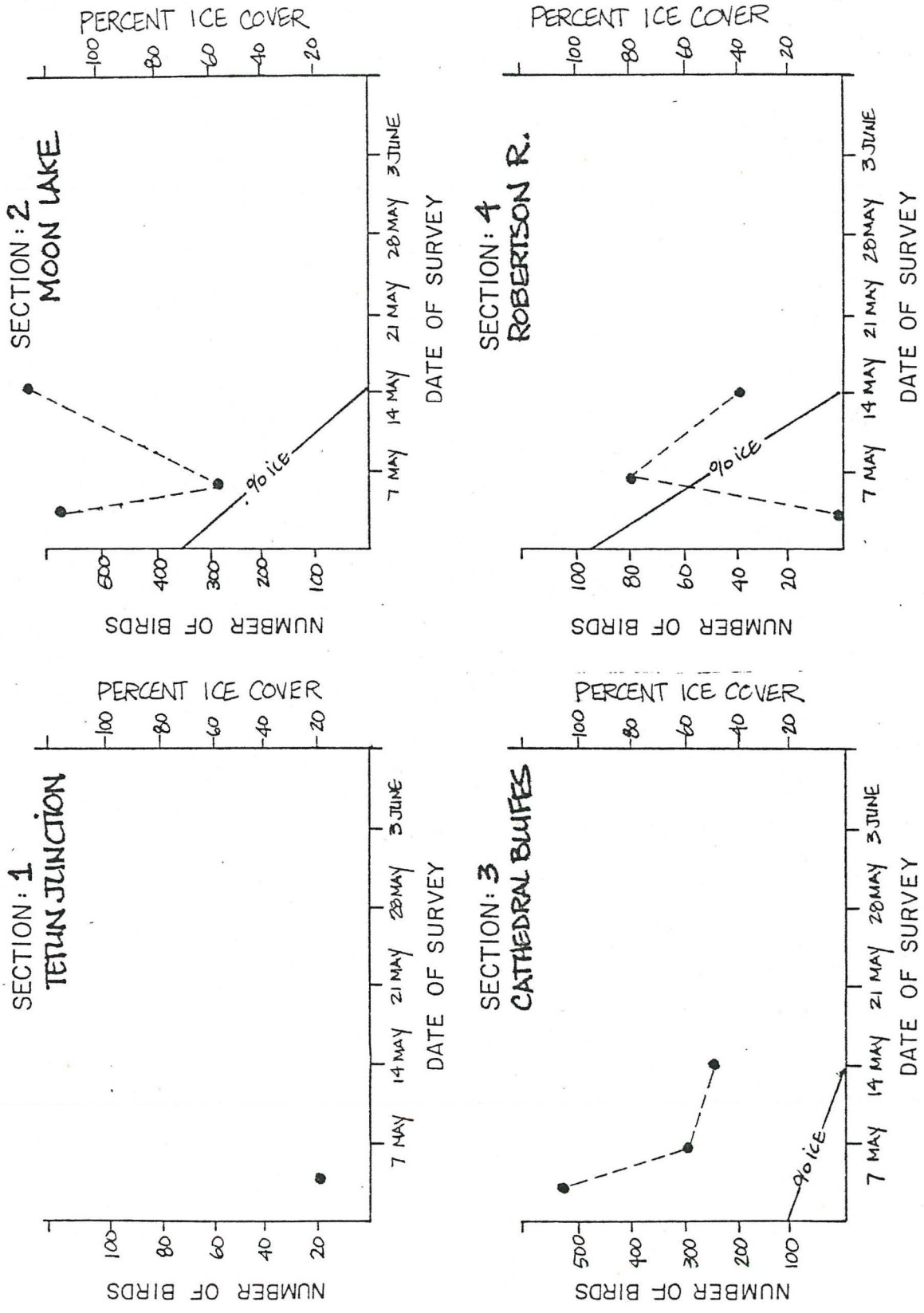
General Remarks: _____

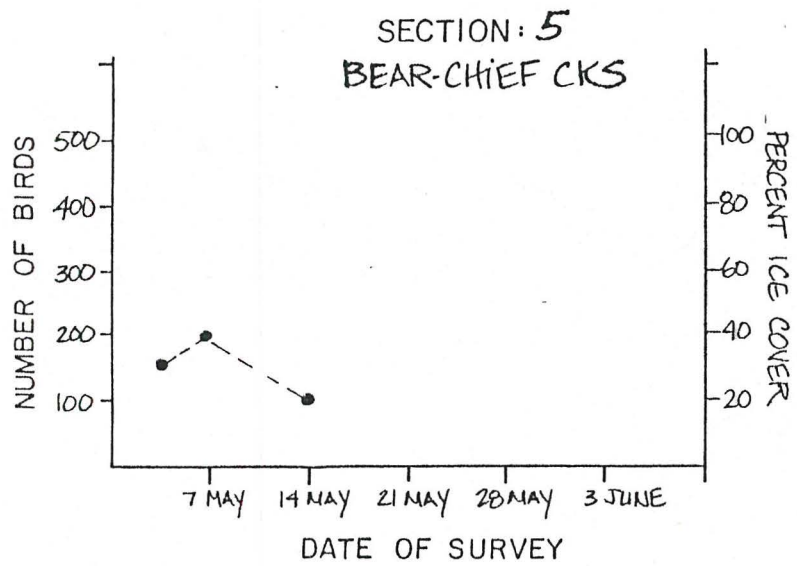
_____

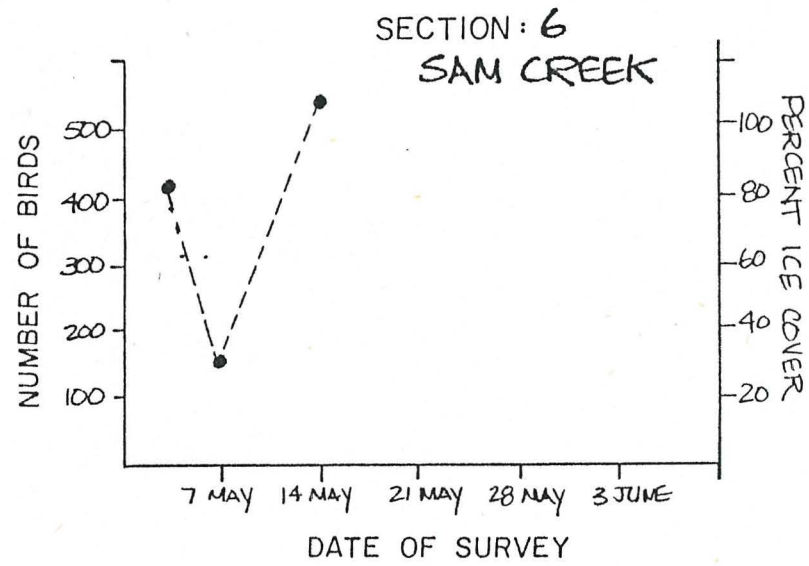
APPENDIX 2. 1980 Aerial Waterfowl Surveys along the Proposed Gas Pipeline Corridor: Dates, Destinations, and Flight Conditions.

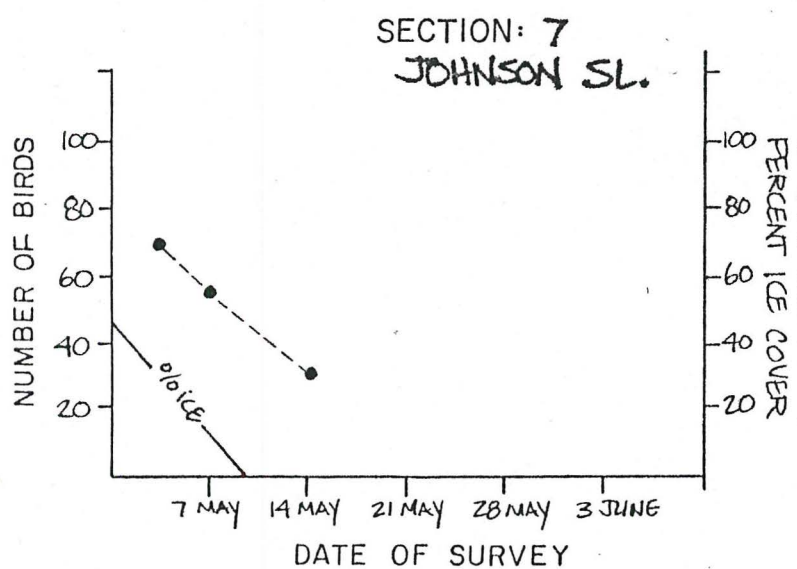
Date	Survey Destination	Hr. flown	Remarks
30 April '80	Big Delta to the Yukon River	5.6	clear and calm
1 May '80	Yukon River to Pump Sta. No. 3	7.9	clear and calm
3 May '80	Big Delta to Tetlin Junction	5.1	clear and calm
6 May '80	Fairbanks to Tetlin Junction	5.9	clear and calm
7 May '80	Fairbanks to Pump Sta. No. 3	6.0	scratched at Atigun
10 May '80	Fairbanks to Tetlin Junction	6.6	clear and calm
11 May '80	Fairbanks to Pump Sta. No. 3	0.0	scratched at Fai. due to turbulence
13 May '80	Fairbanks to Pump Sta. No. 3	8.0	clear, turbulent
14 May '80	Fairbanks to Tetlin Junction	3.0	overcast, turbulent scratched at Shaw Ck.
15 May '80	Big Delta to Tetlin Junction	4.0	clear, and calm
18 May '80	Fairbanks to Pump Sta. No. 3	0.0	scratched at Fai. due to turbulence
19 May '80	Fairbanks to Pump Sta. No. 3	6.1	scratched at Atigun

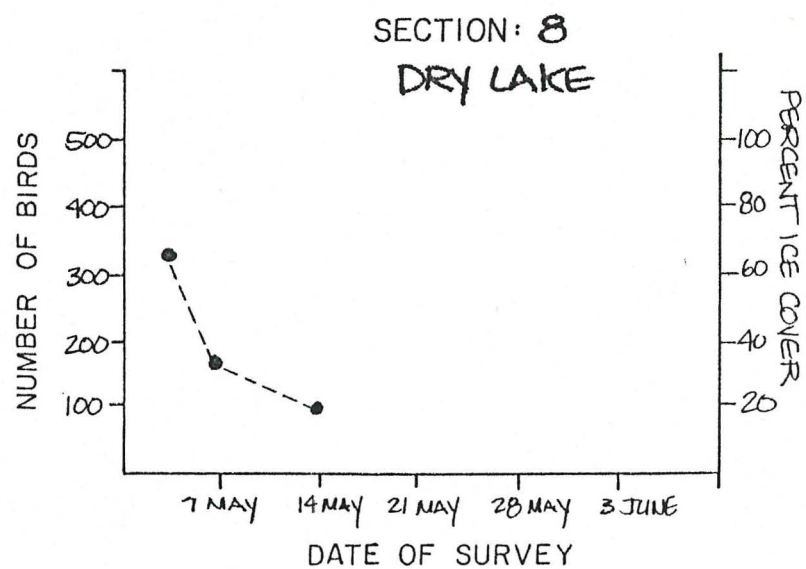
APPENDIX 3. Progression of spring and Waterbird Numbers at Wetland study areas.

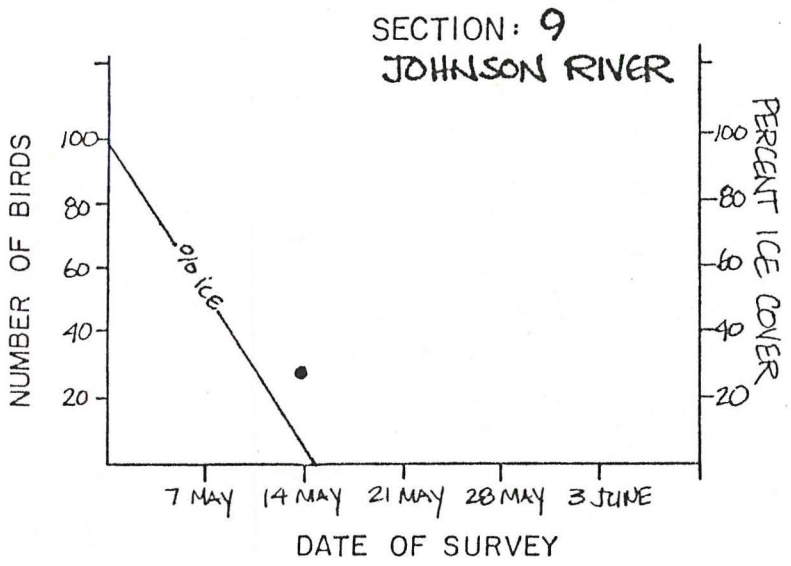


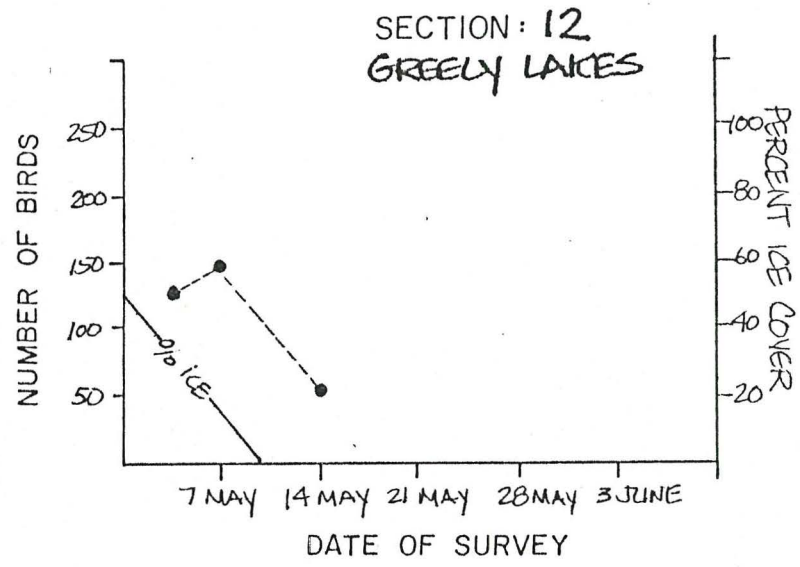

SECTION: 5
BEAR-CHIEF CKS
NUMBER OF BIRDS
500
400
300
200
100
PERCENT ICE COVER
100
80
60
40
20
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

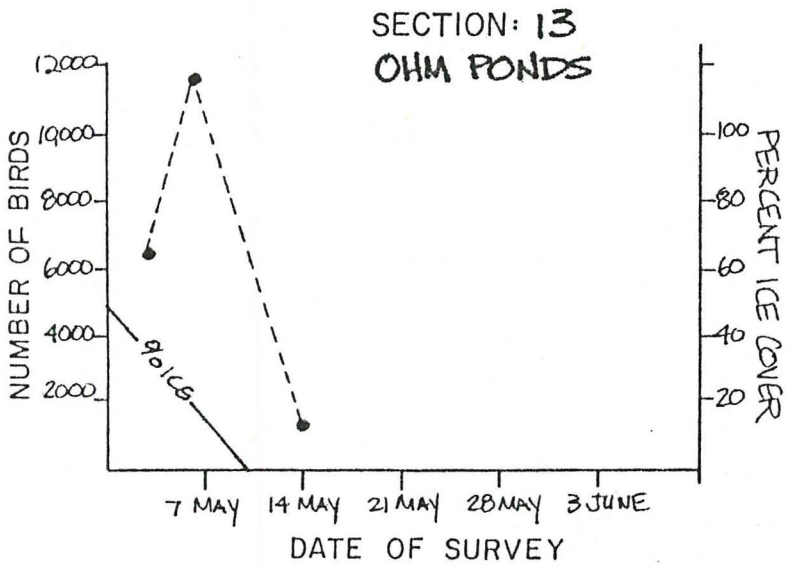

SECTION: 6
SAM CREEK
NUMBER OF BIRDS
500
400
300
200
100
PERCENT ICE COVER
100
80
60
40
20
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

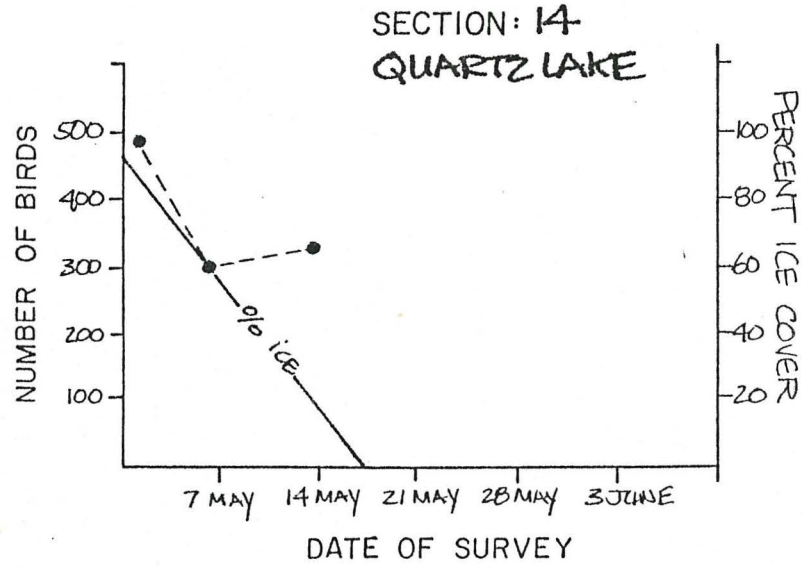

SECTION: 7
JOHNSON SL.
NUMBER OF BIRDS
100
80
60
40
20
0% ICE
PERCENT ICE COVER
100
80
60
40
20
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY


SECTION: 8
DRY LAKE
NUMBER OF BIRDS
500
400
300
200
100
PERCENT ICE COVER
100
80
60
40
20
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

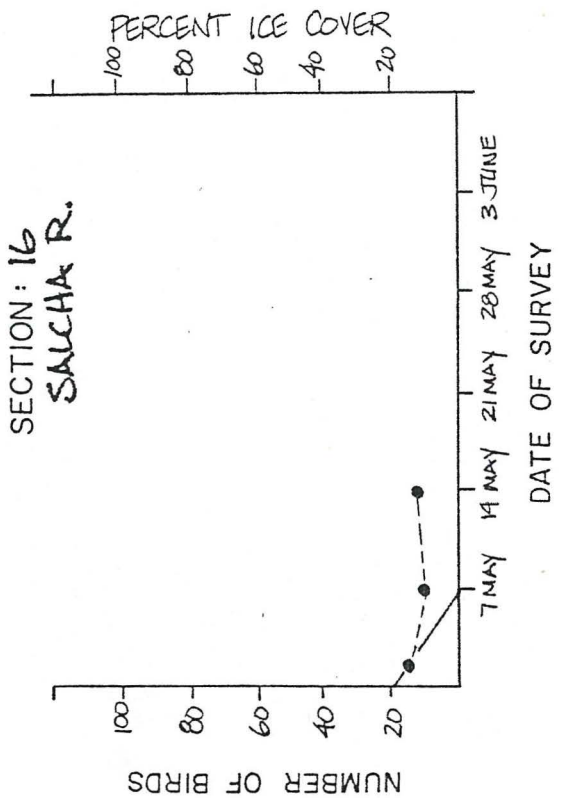

SECTION: 9
JOHNSON RIVER
NUMBER OF BIRDS
PERCENT ICE COVER
0% ICE
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

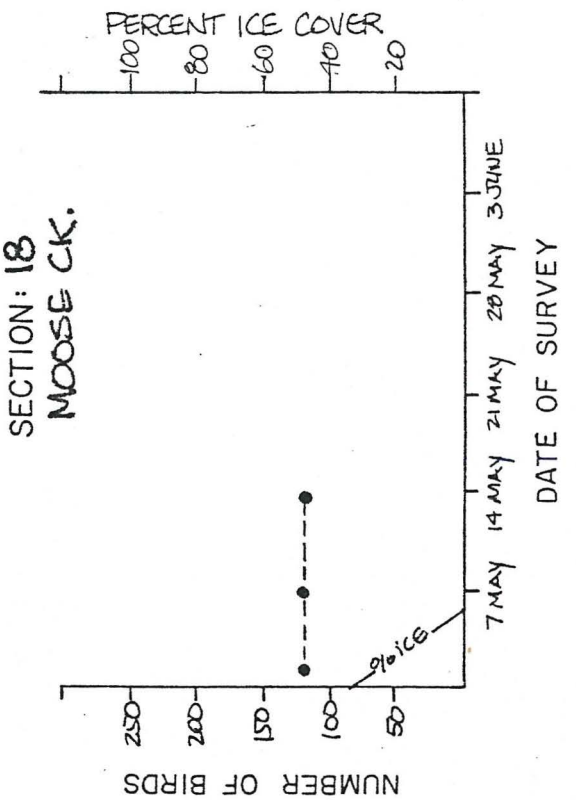

SECTION: 12
GREELY LAKES
NUMBER OF BIRDS
PERCENT ICE COVER
0% ICE
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

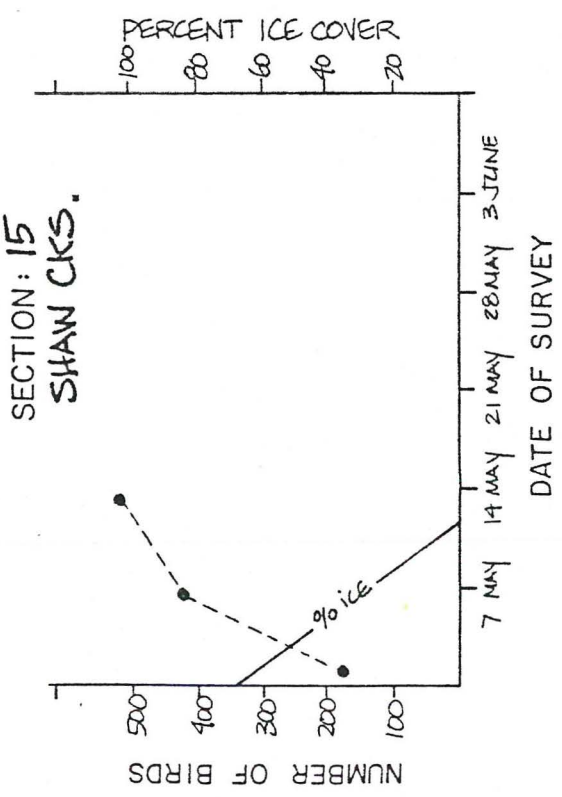

SECTION: 13
OHM PONDS
NUMBER OF BIRDS
PERCENT ICE COVER
90% ICE
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

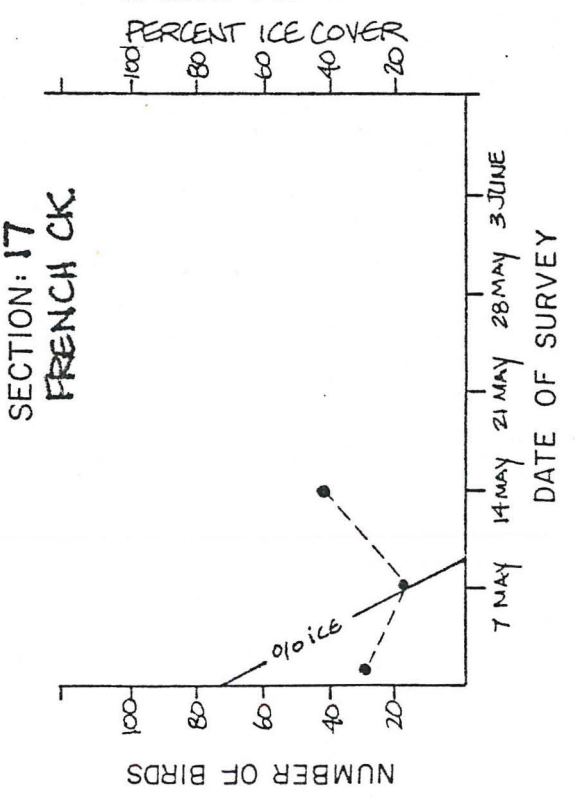

SECTION: 14
QUARTZ LAKE
NUMBER OF BIRDS
PERCENT ICE COVER
0% ICE
7 MAY
14 MAY
21 MAY
28 MAY
3 JUNE
DATE OF SURVEY

APPENDIX 3. continued.









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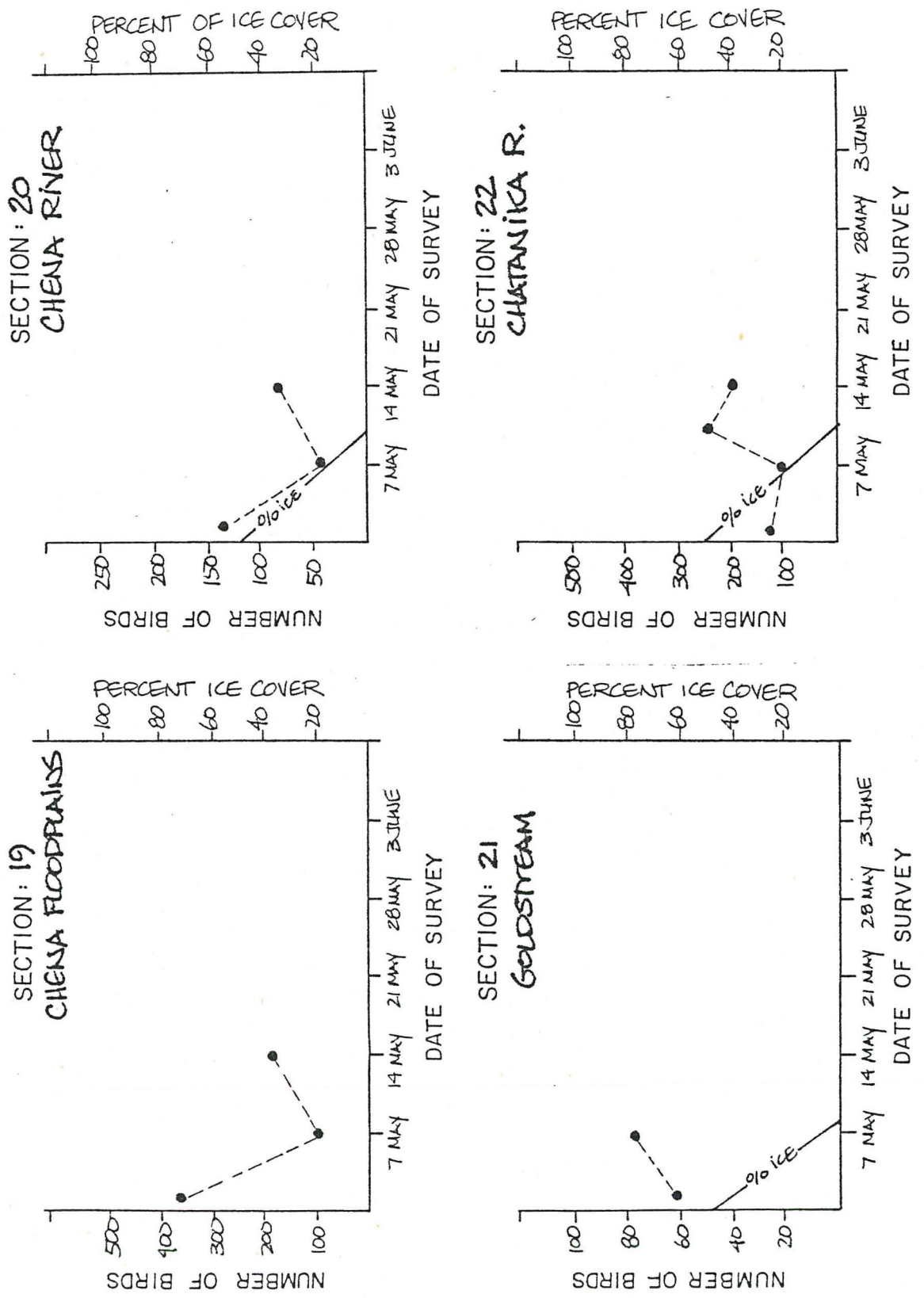

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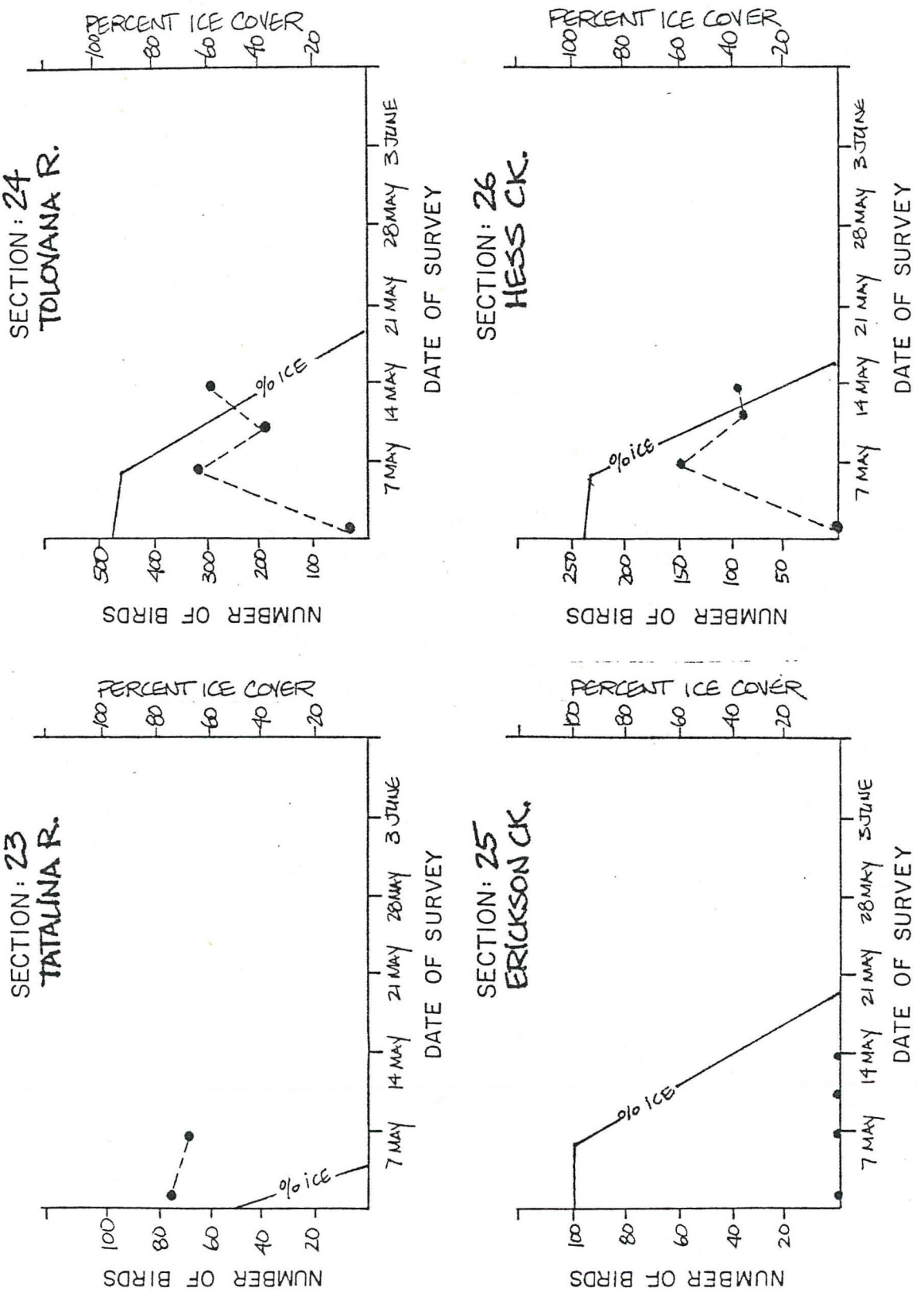

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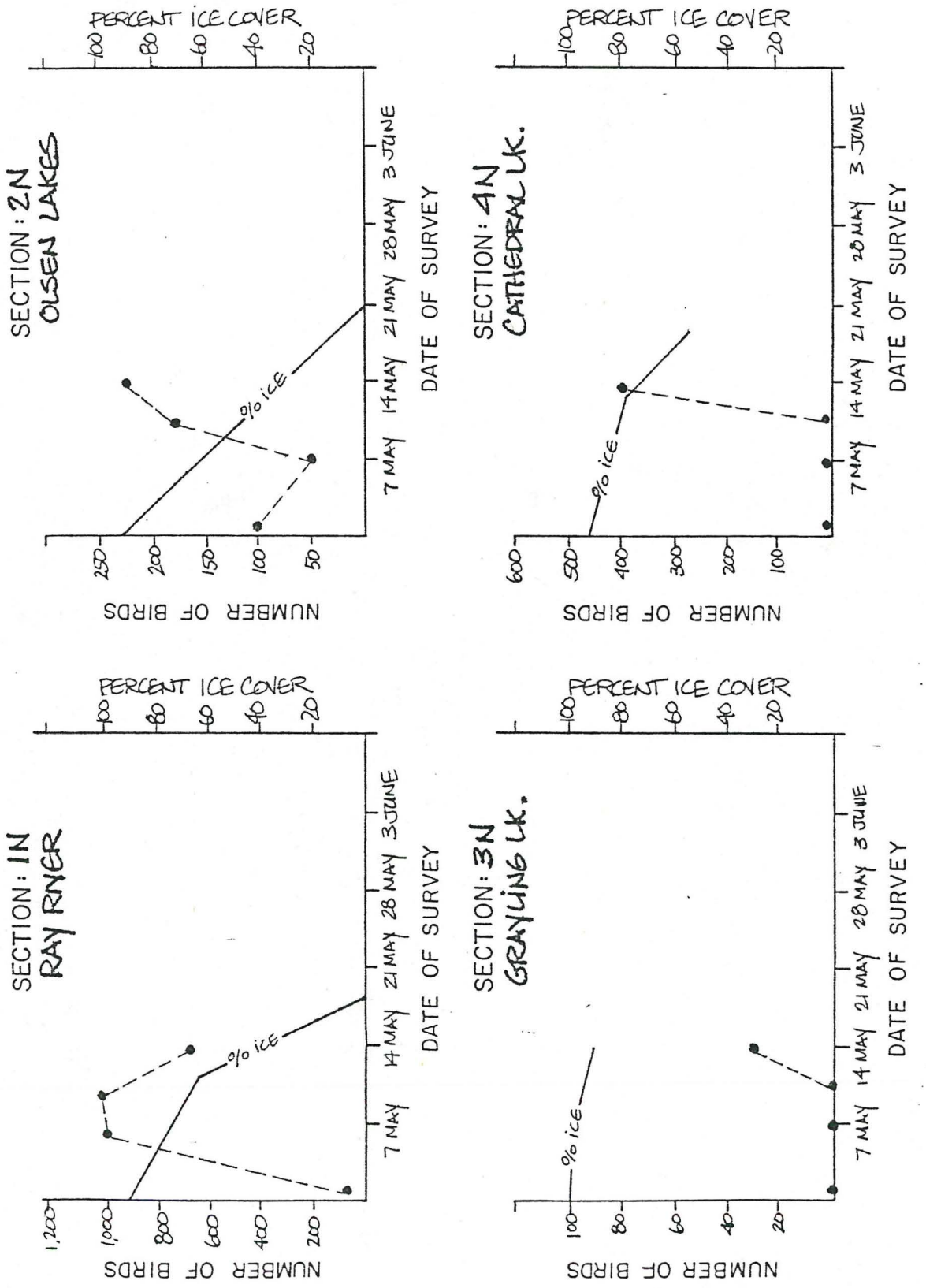

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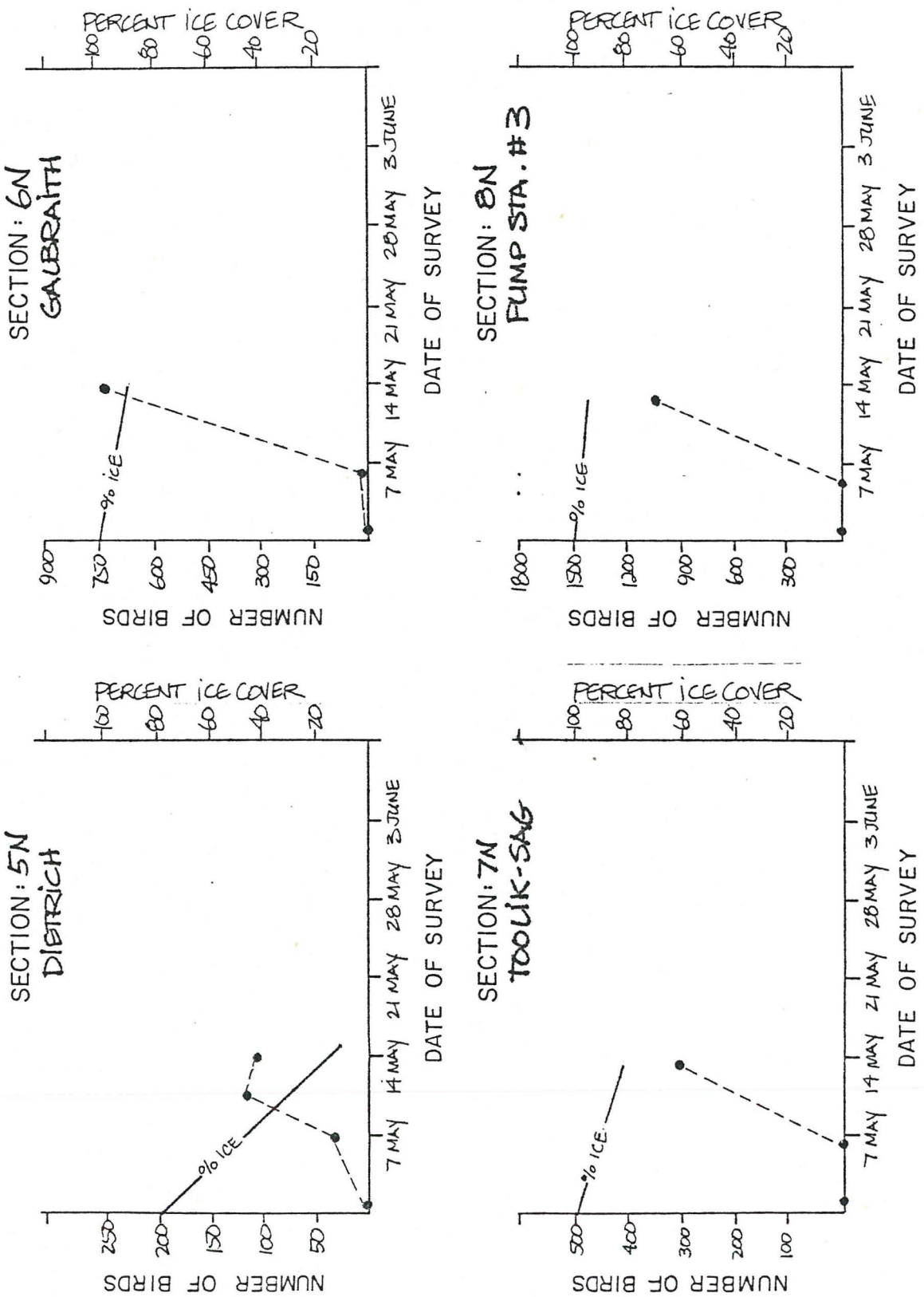

APPENDIX 4. Composition and Numbers of Waterbirds observed to date on 1980 Spring Surveys.

BIG DELTA TO YUKON RIVER

Species	30 Apr.	6 May	13 May		
Swan	3	6			
Canada geese	110	68	26		
W.F. geese			1		
unid. geese			1		
geese subtotal	110	68	28		
Pintail	55	96	106		
Mallard	78	81	101		
Wigeon		185	240		
Shoveler		25	119		
G.W. Teal		10	27		
Dabbler	1288	87	365		
Dabbler subtotal	1421	484	985		
Scaup	12	653	437		
Goldeneye		28	4		
Bufflehead		61	35		
Canvasback		10	4		
Redhead			1		
Ring-neck			5		
Scoter			10		
Diver	73	391	292		
Diver subtotal	85	1143	788		
Merganser	2				
Unid. duck		15	114		
Crane		3			
Shorebird	20	19	39		
Loon					
Grebe			2		
Gull	10	2	2		
Total	1651	1740	1958		

APPENDIX 4. continued.

TETLIN JUNCTION TO BIG DELTA

Species	3 May	6 May	15 May		
Swan	60	13			
Canada Geese	2584	244	92		
W.F. geese	30				
unid. geese	33	2			
geese subtotal	2647	246	92		
Pintail	50	445	130		
Mallard		92	36		
Wigeon		183	134		
Shoveler		48	52		
G. W. Teal		69	125		
Gadwall					
Dabbler	3356	2201	1050		
Dabbler subtotal	3356	3038	1527		
Scaup	29	266	161		
Goldeneye		4	2		
Bufflehead		22	5		
Canvasback		10	6		
Redhead	2	2	1		
Ring-neck					
Scoter					
Diver	56	51	250		
Diver subtotal	87	355	425		
Merganser		5	2		
unid. duck			30		
Crane	2300	9250	350		
Shorebird	15	12	425		
Loon					
Greber					
Gull	30	7	37		
Total	8495	12926	2888		

APPENDIX 4. continued

YUKON RIVER TO ATIGUN

Species	1 May	7 May	10 May	13 May	
Swan					
Canada geese	115	118	106	8	
W.F. geese		20	17		
unid. geese				200	
geese subtotal	115	138	123	208	
Pintail	18	90	112	104	
Mallard	2	108	26	29	
Wigeon		13	50	118	
Shoveler			10	16	
G.W. Teal		6	1	8	
Gadwall					
Dabbler	31	470	560	247	
Dabbler subtotal	51	687	759	522	
Scaup		204	50	150	
Goldeneye	2	8	6	7	
Bufflehead		8	15	20	
Canvasback		30		24	
Redhead					
Ring-neck					
Scoter				4	
Diver		40	436	451	
Diver subtotal	2	290	509*	656	
Merganser	3				
unid. duck				20	
Crane					
Shorebird			2	6	
Loon					
Grebe					
Gull			2	3	
total	171	1115	1394	1415	

APPENDIX 4. continued.

ATIGUN TO PUMP STATION NO. 3

Species	1 May	5 May	13 May		
Swan		2	7		
Canada geese			58		
W.F. geese			515		
unid. geese			500		
geese subtotal			1073		
Pintail		6	206		
Mallard			38		
Wigeon			4		
Shoveler			2		
G.W. Teal					
Gadwall					
Dabbler			702		
Dabbler subtotal			952		
Scaup					
Goldeneye					
Bufflehead					
Canvasback					
Redhead					
Ring-neck					
Scoter					
Diver			10		
Diver subtotal			10		
Merganser					
unid. duck					
Crane					
Shorebird					
Loon					
Grebe					
Gull			2		
Total		8	2044		