Figure 4. Polar bears observed during an aerial survey conducted along the coast and barrier islands of the Beaufort Sea, Alaka, October 3, 2001.

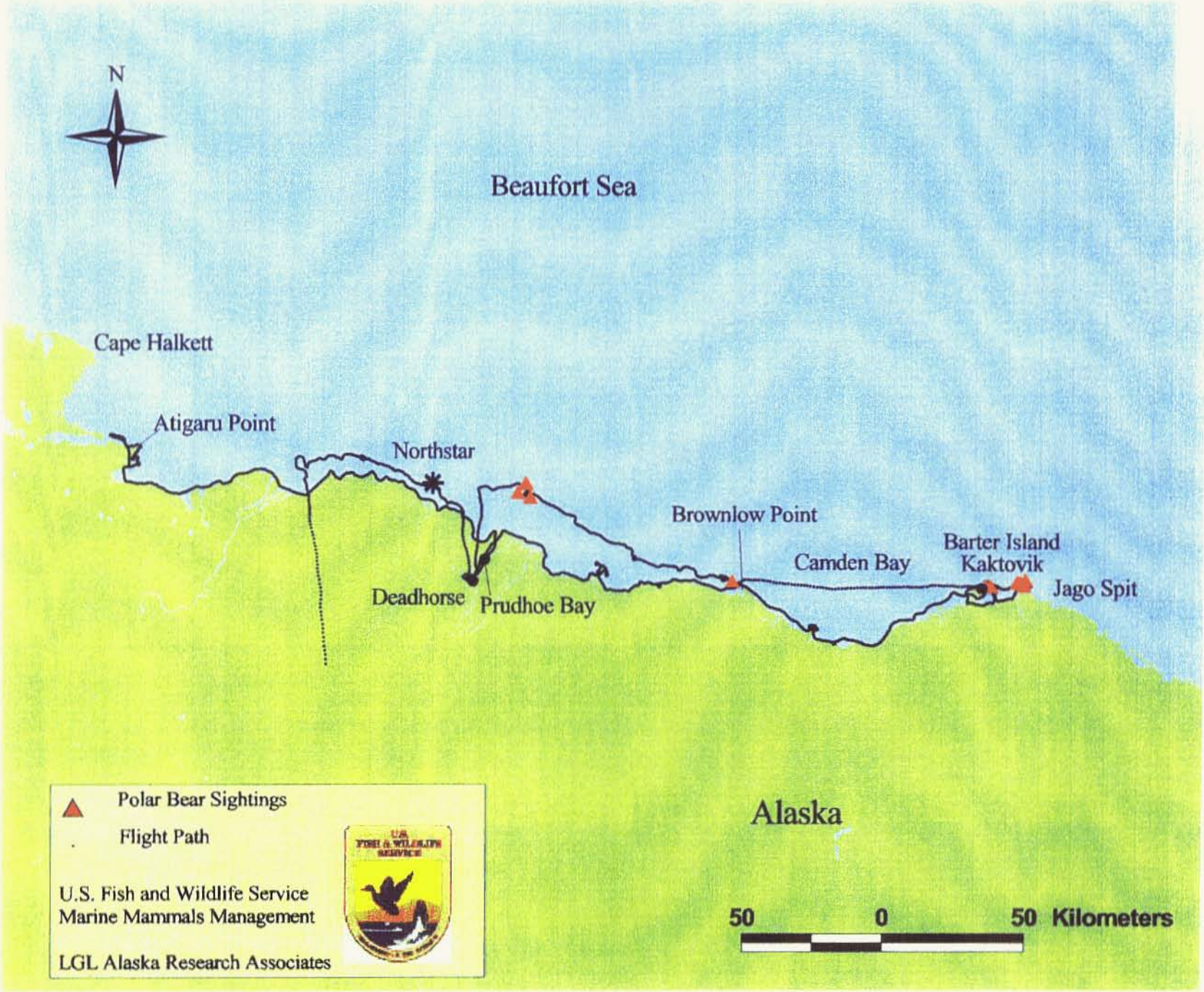

Figure 5. Polar bears observed during an aerial survey conducted along the coast and barrier islands of the Beaufort Sea, Alaka, October 10, 2001.

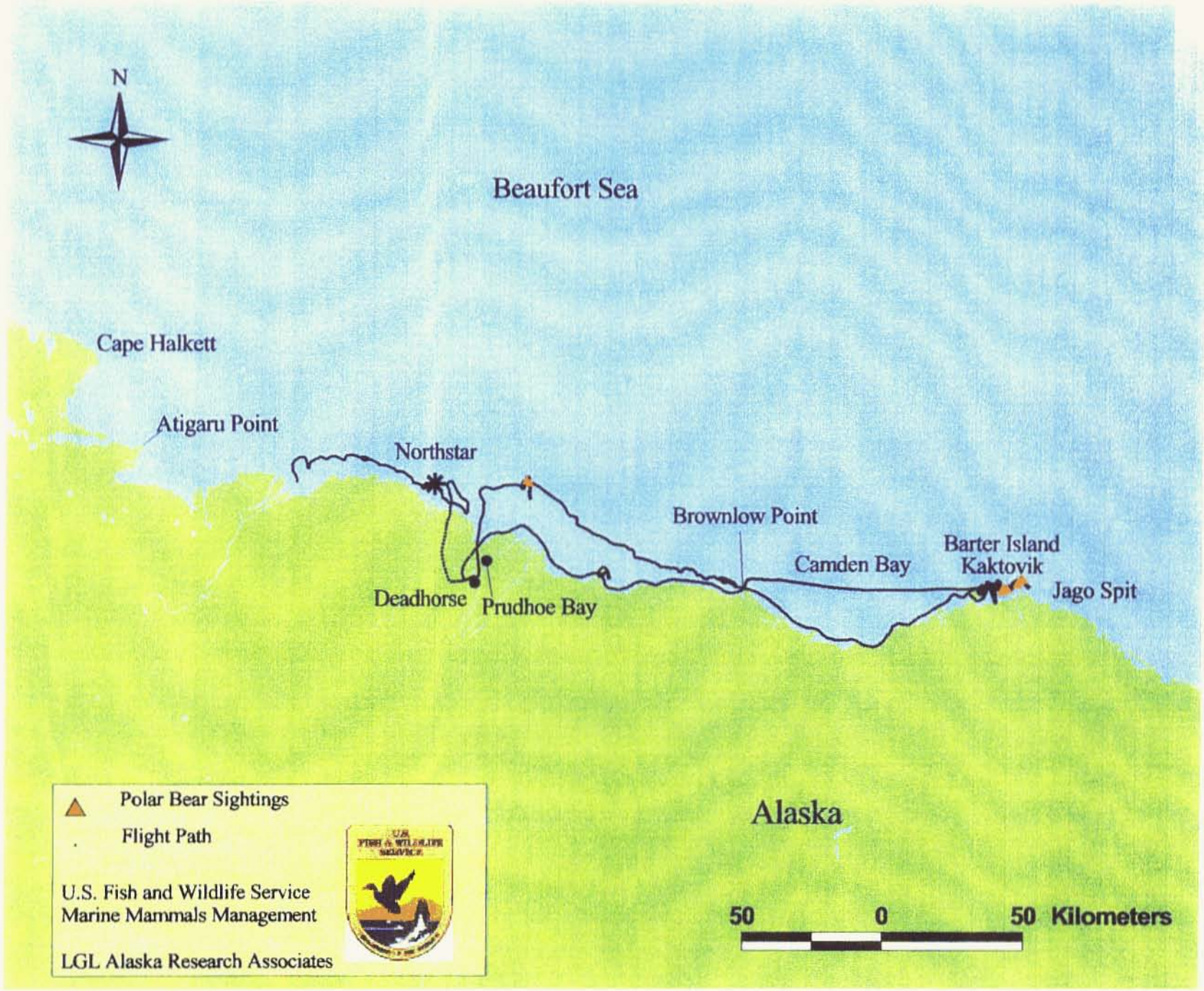

Figure 6. Polar bears observed during an aerial survey conducted along the coast and barrier islands of the Beaufort Sea, Alaka, October 17, 2001.

Appendix 1. Data Sheet and Survey Codes

Entered | Error Checked

FLIGHT DATA SHEET

PAGE ___ OF ___

LIGHT: ______________
yyyy-mm-dd [A/B/C][1/2]
A,B... = survey effort of day
1,2 = aircraft in survey
"fill in when GPS is downloaded"

Aircraft: __________ N ______
FAA #

Survey Type: Independent Inline
Aircraft Position: 1/1 1/2 2/2
Target Survey Altitude: ________ feet
Target Ground Speed: ________ knots

Crew	Role	Data
________	Pilot Right	
________	Pilot Left	
________	Mechanic	O
________	RA RF LA LF	O
________	RA RF LA LF	O
________	RA RF LA LF	O

eparture Time: ______________
rival Time: ______________
ight Summary:

me :00:00	Flight Mode	Observation	Count	Activity (Before / After)	Ice Stage	Form	Observation Conditions Visibility / Wx / Precip
	Fly Land Circle Hover Transect	Polar Bear PB Track [old/new] Seal ________ Walrus Other________	1st Full	Inactive OO Walk OO Run OO Eat OO Swim OO	Open Water Nilas Young First-Year Multi-Year	New Brash Pancake Cake Belt Strip Floe: [S M L V G]	Good/Fair/Poor Mist Glare? O Drizzle Fog? O Rain Snow/Sleet
ansect id: ______		*Zone:* 1 2 3 4 5 6 7 ____° 1st Observer (seat)__________			___%Ice cover___%Snow cover		*Max. Zone Visible:* R 1 2 3 4 5 6 7 L 1 2 3 4 5 6 7 ___% cloud C
	Fly Land Circle Hover Transect	Polar Bear PB Track [old/new] Seal ________ Walrus Other________	1st Full	Inactive OO Walk OO Run OO Eat OO Swim OO	Open Water Nilas Young First-Year Multi-Year	New Brash Pancake Cake Belt Strip Floe: [S M L V G]	Good/Fair/Poor Mist Glare? O Drizzle Fog? O Rain Snow/Sleet
ansect id: ______		*Zone:* 1 2 3 4 5 6 7 ____° 1st Observer (seat)__________			___%Ice cover___%Snow cover		*Max. Zone Visible:* R 1 2 3 4 5 6 7 L 1 2 3 4 5 6 7 ___% cloud C
	Fly Land Circle Hover Transect	Polar Bear PB Track [old/new] Seal ________ Walrus Other________	1st Full	Inactive OO Walk OO Run OO Eat OO Swim OO	Open Water Nilas Young First-Year Multi-Year	New Brash Pancake Cake Belt Strip Floe: [S M L V G]	Good/Fair/Poor Mist Glare? O Drizzle Fog? O Rain Snow/Sleet
ansect id: ______		*Zone:* 1 2 3 4 5 6 7 ____° 1st Observer (seat)__________			___%Ice cover___%Snow cover		*Max. Zone Visible:* R 1 2 3 4 5 6 7 L 1 2 3 4 5 6 7 ___% cloud C
	Fly Land Circle Hover Transect	Polar Bear PB Track [old/new] Seal ________ Walrus Other________	1st Full	Inactive OO Walk OO Run OO Eat OO Swim OO	Open Water Nilas Young First-Year Multi-Year	New Brash Pancake Cake Belt Strip Floe: [S M L V G]	Good/Fair/Poor Mist Glare? O Drizzle Fog? O Rain Snow/Sleet
ansect id: ______		*Zone:* 1 2 3 4 5 6 7 ____° 1st Observer (seat)__________			___%Ice cover___%Snow cover		*Max. Zone Visible:* R 1 2 3 4 5 6 7 L 1 2 3 4 5 6 7 ___% cloud C

SURVEY CODES

'LIGHT INFORMATION

'light ID
ıssign when the GPS tracklog is .ownloaded, using the format:

yyy-mm-dd-[A/B/C]-[1/2]
vhere
ı, B, C ... = sequential survey ffort of day
or 2 = aircraft position in survey.

ıircraft
Jote model of aircraft and FAA ıumber.

)eparture and Arrival Time
:ime of sighting in 24 hour clock hh:mm:ss) synchronized with 3PS in GMT –8 (summer), -9 daylight savings time).

ıurvey Type
ndependent = one aircraft flying n independent survey effort
n-line = two aircraft flying survey ffort in line.

ıircraft Position
/1 = aircraft flying independent urvey
/2 = first aircraft flying in-line urvey
!/2 = second aircraft flying in-line .urvey.

:rew
.ast name of each participant, their ole, and who maintained the latasheet

'ilot (right and/or left)
Mechanic
.F = Left Forward Observer
.A = Left Aft Observer
RF = Right Forward Observer
RA = Right Aft Observer.

:heck Data next to data recorder's ıame.

SIGHTING INFORMATION

Time
Time of sighting in 24 hour clock (hh:mm:ss) synchronized with GPS in GMT –8 (summer) or -9 (daylight savings time).

Flight Mode
Circle each change in flight mode:

Fly = aircraft in flight, not on survey
Land = aircraft lands on ground, ice or ship
Circle = aircraft leaves transect line to circle polar bear group and verify count
Hover = aircraft ceases forward movement while in the air
Transect = aircraft begins survey transect (record transect number).

Observation
Circle observation type. Note whether polar bears tracks are old or new. Note species as follows:

ARFO = Arctic Fox
BESE = Bearded Seal
BEWH = Beluga Whale
BOWH = Bowhead Whale
GRWH = Gray Whale
RBSE = Ribbon Seal
RISE = Ringed Seal
SPSE = Spotted Seal
UNWH = Unidentified Whale

Other = note kill sites and additional observations.

Initial and Full Counts
Note number(s) of polar bears initially observed (1st) and number(s) observed at completion of circle (Full).

Zone/Angle
Note zone in which polar bear(s) was observed. Record angle of sighting.

Activity
Check polar bear activity when first sighted and when circling of bear is completed.

1st Observer
Note role of person who first made the observation. If only observed by video camera, make a new entry at the end of the flight datasheet and note "Video Camera" as the observer.

Notes
Add additional information in the space below each event entry.

ICE CONDITIONS

Ice Stages and Forms
Circle stages and forms that are present (see attached definitions).

Ice and Snow Cover
Record to nearest 10%.

OBSERVER CONDITIONS

Visibility
Note overall visibility as:

Good = 100% of survey area from aircraft to horizon is completely visible to both observers with no interference from glare, fog, precipitation, etc.
Fair = 75-100% " "
Poor = 50-75% " ".

Glare and Fog
Check if present.

Precipitation
Note as follows:

Mist = water floating in the atmosphere as a fine spray
Drizzle = water falling lightly in the atmosphere in small droplets
Rain = water falling steadily in the atmosphere
Snow/sleet = large droplets of precipitation in the form of crystals formed from freezing water.

Zone
Note maximum zone of visibility for both right and left observers.