State of Alaska
Department of Environmental Conservation
Division of Spill Prevention and Response

Trip Summary of 20 April 2017 Aerial Overflight of Hilcorp Natural Gas Leak, Cook Inlet

In Attendance:

Josh Brekken (Habitat Biologist, ADF&G)
Jacob Cunha (Habitat Biologist, ADF&G)
Jody Barthlow (Spill Prevention and Response, ADEC)
Katrina Chambon (Division of Water, ADEC)
Craig Ziolkowski (Spill Prevention and Response, ADEC)
Todd (Pilot, Ross Aviation)
Brandon (Pilot, Ross Aviation)

Weather Conditions: During the survey period, 1:45 pm to 3:10 pm, surface air temperature at the Ted Stevens International Airport remained at 50 F. Visibility was 10 miles and winds were variable and ranged between 7 and 9 miles per hour throughout the survey period.

Tide: The tide was outgoing, with high tide occurring at 12:45 pm with a height of 15.17 feet for Nikiski, Alaska. Similarly, the high tide for East Foreland was predicted to occur at 12:24 pm at a height of 15.9 feet.

Ice Concentrations: Overall ice concentrations have reduced in Upper Cook Inlet. Ice remained stranded across the mudflats of Chickaloon Bay and residual shorefast ice was beached at or near the wrack line.

Trip Summary: Prior to the flight, in discussion with Ross Aviation pilots, Todd and Brandon, it was determined this survey would need to return at or near 3:00 pm, allowing for approximately 1.25 hours of survey effort. Due to the abbreviated flight time, the Kalgin Island portion of the survey was eliminated. Additionally, this survey would be conducted at an altitude of 1000 feet and airspeed of 130 knots. If objects of interest or aggregations of birds were observed: circling, reduction in speed, or decrease in altitude could be requested and implemented based on concurrence with pilots. Marine mammal sightings would require an altitude increase to 1500 feet prior to circling to avoid disturbance. Overall reduction in ice concentration was widespread. Several bird sightings occurred throughout the survey however none were located near the gas release area. Overall, bird abundance and distribution in Cook Inlet has continued to increase. In addition to several bird sightings, Beluga whales (approximately 6) were observed near the Beluga River. Figure 1 is a graphical depiction of the survey trackline and Figure 2 contains select photos.

1:48 pm: Departed Ross Aviation and transited toward Chickaloon Bay. From Chickaloon Bay the survey continued south following the eastern shoreline of Cook Inlet to Kenai. Shoreline survey was undertaken at a distance of approximately ½ mile from shore.

1:52 to 2:00 pm: Surveyed the Chickaloon Bay area at 1000 feet altitude and airspeed of 130 knots. Beach ice was concentrated throughout the mudflats with numerous open leads occurring in the channelized areas. Several gulls were observed flying in the greater Chickaloon Bay area.

2:18 pm: Continued past East Foreland area toward Kenai, frequent sightings of gulls flying and on water occurred in this area. The number of individuals in each sighting ranged from single birds to aggregations of approximately 75. From Kenai the aircraft transited to the west side of the inlet.

2:31 pm: Arrived at west side of Cook Inlet, north of Big River.

2:33 pm: Two swans were observed south of Kustatan River.

2:35 pm: Observed 1 duck (black and white) flying just over surface of water at West Foreland.

2:37 pm: Survey entered Trading Bay area.

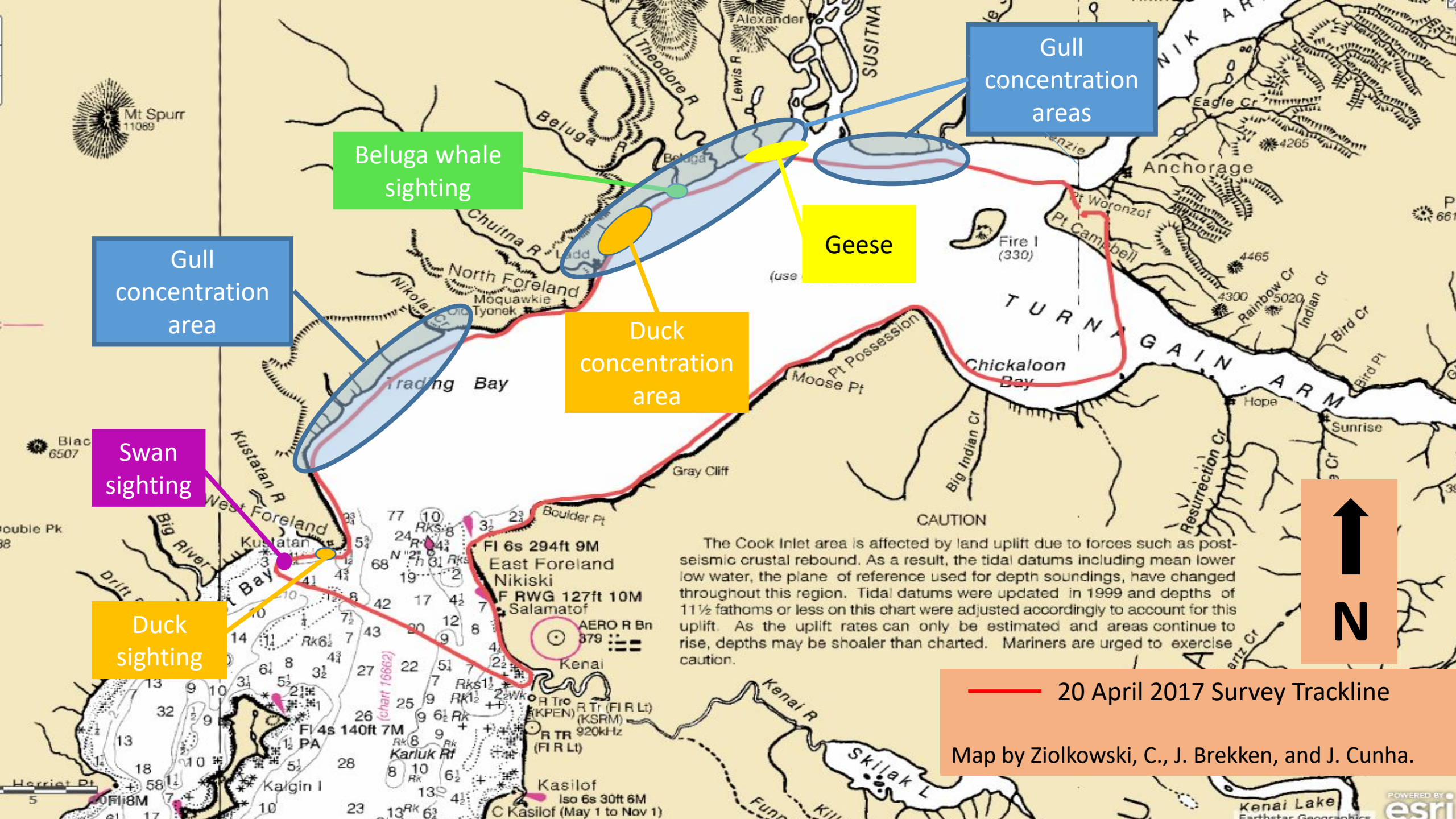
2:39 to 2:57 pm: Numerous gulls, individual and aggregations, flying along shore, resting on water or mudflats encountered. Total number of gulls observed ranges between 700-900 individuals. Additionally, approximately 200 brown to drab colored ducks were observed resting on mudflats aggregated in groups of 20 to 60 individuals.

2:54 pm: Observed 6 Beluga whales in mouth of Beluga River.

2:58 pm: Arrived at west side of the Susitna River, encountered approximately 20 geese flying low over water. Observations of gull aggregations continued between the Susitna and Little Susitna Rivers.

3:03 pm: Arrived at the Little Susitna River, conclude survey effort.

3:07 pm: Arrived at Ted Stevens International Airport, taxi to terminal.


Gull concentration areas
Beluga whale sighting
Geese
Gull concentration area
Duck concentration area
Swan sighting
Duck sighting
Mt Spurr 11069
Alexander
Theodore R
Lewis R
SUSITNA
Beluga
Beluga Pt
Chuitna R
Ladd
North Foreland
Nikolai Cr
Moquawkie
Old Tyonek
Trading Bay
Kustatan R
West Foreland
Kustatan
Big River
Drift
Bay
Boulder Pt
Gray Cliff
Moose Pt
Pt Possession
Chickaloon Bay
Big Indian Cr
Eagle Cr
Anchorage
Pt Woronzof
Pt Campbell
Fire I (330)
Rainbow Cr
Indian Cr
Bird Cr
Bird Pt
Hope
Sunrise
Resurrection Cr
TURNAGAIN ARM
Fl 6s 294ft 9M
East Foreland
Nikiski
F RWG 127ft 10M
Salamatof
AERO R Bn 379
Kenai
R Tro (KPEN)
R Tr (Fl R Lt) (KSRM) 920kHz
R TR (Fl R Lt)
Fl 4s 140ft 7M PA
Karluk Rf
Kalgin I
Harriet Pt
Fl 8M
Kasilof
Iso 6s 30ft 6M
C Kasilof (May 1 to Nov 1)
Kenai R
Skilak L
Kenai Lake
CAUTION
The Cook Inlet area is affected by land uplift due to forces such as post-seismic crustal rebound. As a result, the tidal datums including mean lower low water, the plane of reference used for depth soundings, have changed throughout this region. Tidal datums were updated in 1999 and depths of 11½ fathoms or less on this chart were adjusted accordingly to account for this uplift. As the uplift rates can only be estimated and areas continue to rise, depths may be shoaler than charted. Mariners are urged to exercise caution.
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20 April 2017 Survey Trackline
Map by Ziolkowski, C., J. Brekken, and J. Cunha.

Figure 2, select photos from aerial overflight

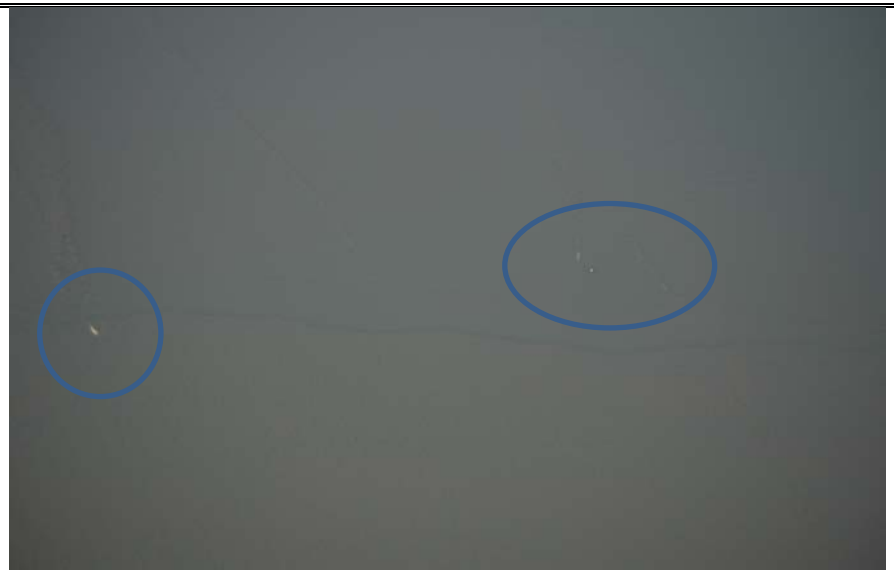
Location: Upper Cook Inlet
Date Photos Taken: 20 April 2017

Photographers: Ziolkowski, C and J. Cunha

Chickaloon Bay mudflats with residual ice stranded.

Swans near Kustatan River.

Mid-channel convergence zone, facing south.



Beluga whales near Beluga River.