

To: Dan Brown, SAC, U.S. Department of Interior Office of Inspector General
From: Dr. Charles Monnett (through counsel)
Date: September 14, 2011

RE: Supplemental Materials on 2006 Polar Biology article: "Observations of mortality associated with extended open-water swimming by polar bears in the Alaskan Beaufort Sea"

After Dr. Monnett's materials that were seized by Inspector General agents in February 2011 were finally returned to him this month, he was able to assemble documents relevant to questions that IG agents have posed to him about this paper.

This supplemental filing includes:

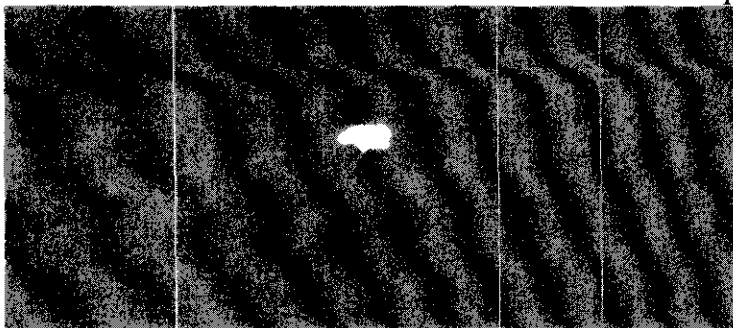
1. Identical notebook entries Drs. Monnett and Gleason both independently made on sightings of each of the four drowned polar bears;
2. A contemporaneous email from Dr. Monnett about both previous swimming bear sightings at the end of the next flight in which three floating bear carcasses were sighted; and
3. A draft of the paper's abstract written by Drs. Monnett and Gleason, prior to journal edits, stating "most of these [swimming bears] probably died as a result of the windstorm."

1. Notebook Entries

The following are observations taken directly from the notebooks of Charles Monnett and Jeff Gleason as they were conducting aerial surveys during the month of September 2004. They reveal that both researchers saw the same four polar bear carcasses and made similar notes of their observations.

The included photos are of one polar bear carcass sighted by both men on these dates. The complete notebook segments are included as Attachments I and II at the end of this submission.

The notes from Jeff Gleason's databook indicate a dead polar bear sighted on September 14:



~~_____~~ bear - dead; possibly entangled =

14 Sep
East 24
2 Bears

Gleason notes another polar bear carcass sighted on September 16:

late McBeth st Plan to work to East (Area 2 and/or 7)
Flight # 13
OFF Ground 0908
ON ~~_____~~ Transit 1027 (100)
OFF ~~_____~~ Transit 1701
ON Ground 1703

(Walking + Feeding, very much speed)

Planned on Transit

Below 1500, reduced clouds. Ten state 3rd, excellent visibility
70% vis. conditions in Area 7

~~_____~~ Dead polar bear; did NOT circle to confirm.

And another on September 18:

Could have 18 Sept 94

74 ⁰⁰	4 feeding - adult	90	0
80 ⁰⁰	11 swimming	90	300
81 ⁰⁰	5 medium	10	3.9
81 ⁰⁰	2 ad swimming	45	830
82 ⁰⁰	2 ad walking	45	0
97 ⁰⁰	2 ad swimming slow	10	
99 ⁰⁰	2 to swimming medium	70	320

135 ⁰⁰	3 Feeding, 4 th swim slow	30	250

His last observation of a polar bear carcass occurred on September 22:

Date: 12/01/01 Plan to do Area 3; 1
 Flight # 18 ... to 10 ...
 BEF (ground) 0915 ...
 015 (ground) 0901 (last ... Area 2)
 GF last (ground) 1458 and 2110, ... Area 10 ...
 ON (ground) 1508

Weather on (ground) ...
 1500-2000 ceiling, ...
 Visibility ...

Dead polar bear ...
 No footprints observed

The data recorded in Dr. Monnett's databook parallel those in Gleason's. Dr. Monnett recorded sightings of dead polar bears on September 14:

9/14 cont.
 38 2
 55-8
 56-12
 29 1BII
 143 needs S.W. tracks
 1420
 120 dead P.P. w/ S.W. tracks
 5*

On September 16:

(F)

(FLT 13)

9/16/04 → 5/7

START 09:55 Roll 0912
ATIS B 160/25M 1400 2100
20.32

13 Seal FB ←

* IF to ...
completeness

30 1.0 0.5

On September 18:

(FLT 015)

9/18/04 → 1, 2, 10

START: 0901 Roll: 0907
E 190/5 25mi CUR -3/-43000

05 PB Swimming
20 S 184 50
23 184
24 2B
27^{25,26} Jeff Wite ~40
P.W.

131 Seal PB, Weather ←
136 E Feedy
137
~~138~~ 45 Feedy
142 33 Feedy
150 G.P. Harris P 10

And finally on September 22:

FLT 018 9/22/04 → Bk 3/11
 AHS CALM CLR 10mi 29.91 -1
 START 0902 OFF 0914
 0930 040/12 WINDS ALOFT
 * RUNTIME 5*
 132 dead PB * ←
 NO BHW
 Down 1511

These notes reflect direct observational data that supports the published work of Drs. Monnett and Gleason. As there were also other witnesses to the sightings, we do believe there should be no further question about the authenticity and accuracy of the observations giving rise to the paper.

II. Email on Sightings

In addition to the databooks, Dr. Monnett sent an email to Fred King, who flew as an observer when the swimming bears were seen pre-storm. The 9/20/04 email referenced "all those swimming Pbears" they had seen during the earlier pre-storm flight. Dr. Monnett reported his first 3 post-storm sightings of drowned bears. (The sighting of the fourth drowned polar bear occurred 2 days later on September 22nd.):

From: Monnett, Charles
Sent: Monday, September 20, 2004 1:05 PM
To: King, Fred
Subject: congrats

What a shocker. I'm guessing your new job won't cramp your fishing as much, so congratulations! Lisa's sure going to miss you as boss.

Lisa mentioned that there might be a timing issue with Jeff Childs for BWASP. Jeff Gleason is willing to stick around D'horse for a few more days if it would help.

We started seeing lots of BHW about a week ago. Total count is now 350. Feeding groups practically in Smith Bay last time we flew there. No significant ice yet...still 200 mi north of most of the study area. We saw the leading edge at 100 mi near Canadian border, but is way offshore elsewhere. Also, of interest...remember all those swimming Pbears. We've seen 3 dead floaters this past week. May not be so smart to take long swims.

III. Draft of Abstract with Weather Reference

In the August 9th interview, Agency May made a point that the paper abstract did not mention the role of weather, although the paper itself does so. While this point is of questionable relevance to a legitimate IG inquiry, Dr. Monnett made the point that there was no attempt to downplay the role of weather as an obvious causative factor in the bear drownings.

In fact, a 12/6/04 draft of the abstract by Drs. Monnett and Gleason clearly references the role of weather as the probable cause of death.

This draft of the abstract was 283 words but the journal's word limit for the abstract was approximately 200 words. Thus, the draft written by the two authors and the final, which appears in the journal is substantially shorter.

Offshore observations of swimming and dead polar bears in the Beaufort Sea: an indication of things to come?

Charles Monnett and Jeffrey S. Gleason
Minerals Management Service, Environmental Studies Section
3801 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503

Abstract: During aerial surveys in early-September, 2004, observers participating in the Minerals Management Service Bowhead Whale (*Balaena mysticetus*) Aerial Survey Project (BWASP) saw an unusually large number of polar bears (*Ursus maritimus*) swimming in open water, >2 km from the Alaska Beaufort Sea coastline. A few days after those survey flights a windstorm passed through the survey area likely causing many of those bears to fatigue and die of drowning. Extrapolation of survey transect data suggests that numbers on the order of 40 bears were swimming and that most of those probably died as a result of the windstorm. From 1987-2004, 315 polar bears were observed during September and of those 26 were in open water, >2 km from shore. During 2004, 14 polar bears were seen in open water, >2 km from shore. Four of those were dead. Distances from land and pack ice edge for the live polar bears swimming in open water in 2004 ($n = 10$) were 8.3 ± 3.0 km and 177.4 ± 5.1 km, respectively.

We speculate that mortalities due to offshore swimming during late-ice (or light ice) years may be a relatively important and unaccounted for source of natural mortality given energetic demands placed on individual bears engaged in long-distance swimming. In addition, we suggest that drowning-related deaths of polar bears may increase in the future if the observed trend of regression of pack ice, and/or longer open water periods caused by increases in ambient air temperature continues.

Don 221-3935
001-907-271-3935

Date 10 Sept 04 Plan to do Area 12 N. of Barrow

Flight # 11

OFF ground 1110

ON 1st Transit 1100

OFF last Transit 1530

ON ground 1647

Transit 14-22 → Barrows from Entry 13

Entry 13 - 2 Barrows breaking through (Area 3)

Entry 14 - 2 Barrows swimming (Area 3) } ON ground

by Δ to 2 records

Weather/cloud or transit (Area 3)

Fog, snow, low cloud w. visibility reduced to 3-5 km

Sea state generally 0-3

Entry 21 - 11 Barrows

Entry 23-26 2, 2, 1, 1 Barrows all feeding in forest

Feeding: swim direction

Entry 20 2000 2 o'clock

21 50

22 50 2 o'clock 3 calves 12 o'clock

23 11:30

24 1 o'clock

25 5 o'clock

26 3 o'clock 35

27 3 o'clock 50

28 3 o'clock 50

29 3 o'clock 50

30 3 o'clock 50

31 3 o'clock 50

32 3 o'clock 50

33 3 o'clock 50

34 3 o'clock 50

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60 3 o'clock 50

Date 14 Sept 04 Plan to do Areas (S) 5 and/or 7 to East

Flight # 12

OFF ground 0918

ON 1st Transit 1130 (Area 1)

OFF last Transit "

ON ground 1417

Weather to Transit (Deerline → Barter Island)

Overcast light snow, little and N-NE 5-10 mph

Some low clouds, patchy fog 200-500 ft

Weather on Transit: Sea high near-100 ft

Entry 11 - Barrows swimming

Entry 12-21 Barrows - w. King/Barrow

Entry 22 4 w. cut swimming off Barter Island

Entry 23 Barrows → 200' - 30' claw

Entry 24 Barrows → 200'

Entry 25 Barrows → 200'

Entry 26 Barrows → 200'

Entry 27 Barrows → 200'

Entry 28 Barrows → 200'

Entry 29 Barrows → 200'

Entry 30 Barrows → 200'

Entry 31 Barrows → 200'

Entry 32 Barrows → 200'

Entry 33 Barrows → 200'

Entry 34 Barrows → 200'

Entry 35 Barrows → 200'

Entry 36 Barrows → 200'

Entry 37 Barrows → 200'

Entry 38 Barrows → 200'

Entry 39 Barrows → 200'

Entry 40 Barrows → 200'

14 Sep
Sept 24
2 Bars

Notes: Stats numbers E of Barter Island, but NOT counted in series

102

103

104

105

106

Plan to work to East (Area 5 subject)

Flight # 13

OFF Ground 0908

ON 1st Transit 1027 (140)

OFF Land Transit 1701

ON Ground 1703

Center on Transit

Ceiling 1500, reduced clouds; 7m stable 1-2, excellent visibility

~10% vis. reduction in Area 7

Dead pole bears; did NOT circle to confirm

F. July 80 - CM: Bowhead swimming adult 750

Early 85 - CM: 1

Early 87 - CM: 2

Early 86 - CM: 1

Early 88 - CM: 1

Early 89 - CM: 2

Early 90 - CM: 1

Early 91 - CM: 2

Early 92 - CM: 1

43 - CM: 1

47 - 56: 1

45 - CM: 1

51 - 4: 2

52 - 5: 1

103 - CM: 2

105 - RW: 1

119 - CM: 1

120 - CM: 2

121 - 14

Milking: Feeding, w/ly swim speed

BIDDING = 3 | some of on the new guy!

122 - 2:0 Bowhead slow swim

123 - CM: 1 milking (2 cow-calf pair)

124 - CM: 2 "

End Transit 1817 due to bowed back systems (no feeding)

149 RW Bowhead = milking Fed. + 3 calves

170 RW Bowhead + 1 calf milking

171 RW Bowhead " medium 270

172 RW Bowhead swim medium 270

Both systems "up" @ 1407

ON ground @ Park to school @ 1430

172 RW Bowhead swim slow 240

175 RW Bowhead swim slow 240

176 RW Bowhead swim

177 RW Bowhead

180 RW Bowhead swim med. 240

181 RW Bowhead swim

182 RW Bowhead swim 270

183 RW Bowhead swim



Sunny

Date: 17 Sept 01 Plan to do Areas 1, 2, 10 → Δ to 3-4 due to low ceiling from NW to the North

OFF Ground: 0904
ON 1st Transit:
OFF Last Transit:
ON Ground: 1014
Weather on Transit:
Vis: good (5-10k) Sea state 3-4

(ON Search) → Did not make transit destructive due to cloud cover (1st layer offshore - most west of sight records)

Note: Intersection of Sun & High (3 or 4) Sea state greatly reduces detectability of all marine species, hence so far possible.

Dummy & cold in NW; report inland ponds below base of heavy forest.
Date: 18 Sept 01 Plan to do Areas 1, 2, 10 or West
Flight #: 15
OFF Ground: 0907
ON 1st Transit: 1014 (Area 12)
OFF Last Transit:
ON Ground: 1148
Weather on Transit:
Vis: good (5-10k) Sea state 3-4

* When "open" records (6)
* For used planes which are not used "as a rule", need code "unknown" for down survey area
* Smaller dots: smaller lines when printed on map
"Sight Line" for vehicle being towed by boat? Towed

Products on Search
Entry 20 1: 30000 surveying medium 30 080
Entry 25 1: " " " " 50 150
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Notes: Intersection of Sun & High (3 or 4) Sea state greatly reduces detectability of all marine species, hence so far possible.

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OFF Transit
Entry 52 3 Feeding (over 1000 birds due to birds very small)

Entry 63 2 Feeding - used plane - unknown size 30 0
Entry 64 2 Surveying boat 30 240
Entry 65 2 Feeding - used plane & 40 by 30 0
Entry 66 2 Feeding - used plane & 40 by 30 0
Entry 67 2 Feeding - used plane & 40 by 30 0
Entry 68 2 Feeding - used plane & 40 by 30 0
Entry 69 2 Feeding - used plane & 40 by 30 0
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Entry 71 2 Feeding - used plane & 40 by 30 0
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Entry 100 2 Feeding - used plane & 40 by 30 0

1014 ON Dead vehicle
68-74

Date: 2/25/04
Plan to do Areas 1, 2 or 3: 11

Flight # 17

OFF Ground: 1527

ON 1st Transit: 1555 (Area 1)

OFF Last Transit: 1650

ON Ground: 1910

some many photos

1500' many @ 1000' top of hill

Weather on Transit: scattered clouds @ ~1500', some lower clouds

scattered steep ground lower in state 3-4

Early if solar beam running on better cloud (on transit) ~ 10% visibility

Early if 1st reduced morning with low

2600' 1st bleed

2700' 1st medium

2900' 1st 5000' fast

10 230

30 240

12 240

15 245

15 245

No Foodplants observed

At least other bees feeding w/ flowers and present on top

Visibility: 5 sm. red head ~ 10' ft from on 22 end of Area 10

Visibility: good overall (5-10km), top of no fog/clouds to the top of Area 10

1500-2000' ceiling, scattered lower clouds, some showers ~ 11:30 AM

Weather on Transit: 8-10 @ 1000'. Some rain on wet upper forest

ON Ground: 1508

OFF Last Transit: (1558 end 2-10, continues on thru Area 1) End = 1952

ON 1st Transit: 0951 (no transit Area 2)

OFF Ground: 0913

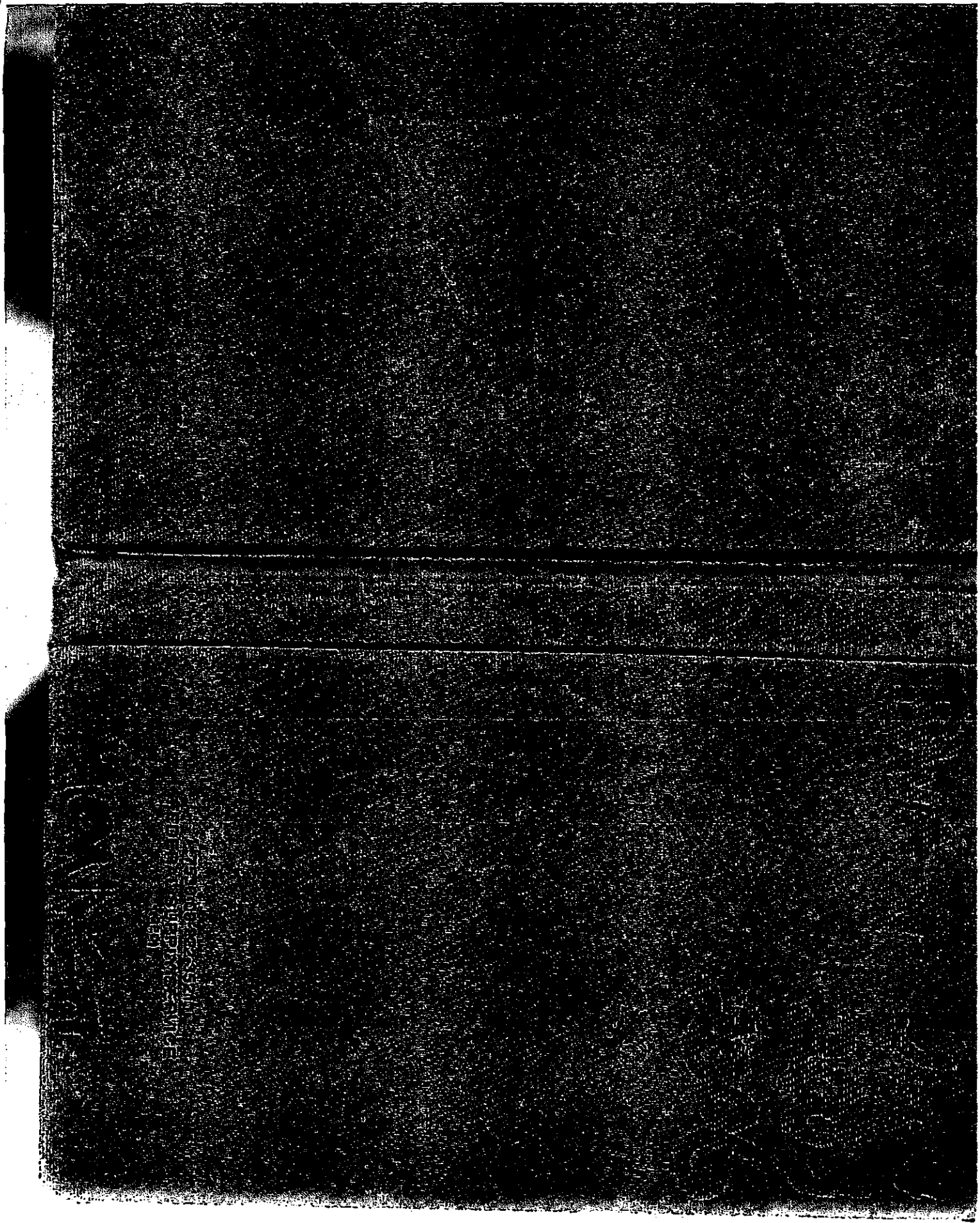
to 20' in Area 2: 10

Flight #: 18

- low ceiling/clouds to 100' near north

Plan to do Areas 3: 11

L



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CHICAGO, ILL.

81

92 80° / 80°

95 30° 4/1 60°

FLT 12 9/14/04 → 5/7

START 0912 Roll 0920 29.99

C 240/6 10M FWD SW 2500 SC
4000 OC

11 1 BH Slow SW

15 70 16

18 3 FL 40° 0° wind

19 440°

20 20

21 50°
22 3PB 9K SW 1 cabi

28 40°

29 70° wind SW

30 3 SW 60°

9/14 cont.

2 31 wa starter
32 R 3

34 1 fuel

35 1 90°

36

37 240° fuel SW

38 2

K.S.

55-8

56-12

70

29 13H

Dumb
1420

125 dead P.P. w/ starter

100 ft from SW 5*

143 needs SW (frags)



9 = 240

FLT 13

9/16/04 → 5/7

START 0905 Roll 0912
ATTIS B 16cf 2 25M 1400 2100
30.32

23 Seal PB ←

* IF bearing failed before 2000
completing 4

30	1A	W	Search	cm
33	1A	W	80 Search	cm
34	2A	W	100 Search	cm
36	1A	W	50 S	cm
38	1A	W	120 S	cm
39	2A	W	mill 150	cm
40	1A		300	cm
41	2/camp		500	cm
43	1		50	cm
42	1		300	cm
44	1	290	150	J6
45	1		50	cm
51	2	T	mill	cm
52	1	T	S. swim	J6

18

103	T	2	Milling	cm
105	T	1	Swimming	J6
120	T		123 SW	er
121	T	9	SW	for
122	T	1	Ad	Ray
123	T	4	(2/2) valves milley	cm
124	T	2	millig	cm
149	10/3	T	millig	R
150	2/1	T	millig	
152	3	T	SW 270	
153	1	sm Ad	SW	cm

Down 1430 140 gal fuel 1200 strike
Call 1512
START 555

172	JBH	T		J6
175	2A	T		
176	1A	30	T	
177	1A	40	T	
178	2A		T	
180	2A		T SE SW	

Down 1755

hel
1 100° 80°

223	2A	Swim	Ch1
228	3A	Swim	cm

FLT 014 - 9/17/04 → 1,2,10
 START @ 0900, OFF 0905
 D 070/07 cur 30.28
 Low Carlings
 Down @ 1018

FLT 015 9/18/04 → 1,2,10
 START: 0901 Roll: 0907
 E 190/5 25 mi cur -3/-4 3000
 05 PB SWOT MINIM
 20 S 1BH 50 CM
 23 1BH 50
 24 2B
 27^{23,26} Jeff Noto ~70 BH
 * Runtine error 5x

052 3BH Feeding
 63 2BH Feeding
 64 2BH 36 2700
 65 3BH Feeding
 065 1142.55 7131.079 50 20
 067 dead whale 20 cur
 86a dead whale 50 26 whale

FLTS CONT

079 plume 90°
 080 3BH 200 11A
 081 5A
 84 2 BH near juv cu
 85 2 BH mudding cu
 97 2 A → 1 BH slow sw 90° 200
 99 2 BH 320/00 90° med Jdc
 131 dead PB, 1000
 136 18 feeding
 137 45 feeding
 142 33 feeding
 150 2 feeding Harris 10 IG
 Down @ 1455 proteasist
 working



FIT 016 9/19/04 → 1/2
 Street 1500 Roll 1600c, 29.75
 050/7 low 1600c, 29.75

019	1A	20°	1 Break	CM
020	2A			
021	1A			
022	1A	35°	swi-	CM
023				
025	1A	1190	65°	bl/sw in on
064	1A	Dire		a
066	1R			
69	1A	45°		Jc
71	1A	a/1 cadg	breach	on
7L				

FIT 017 9/21/04 → Blk 1
 12502 2408 low 1706 sc 3800c 1/-1 29.59
 Street 1520 Roll 1525

014	1R	15°	ASW	CM
016	1A	12°	F SW	CM
017	1A	30°	F SW	Jc
019	2/cyif	10°	F SW	blms

Drawn 15113

FIT 018 9/22/04 → Blk 3/11
 Alls CRM CLK low 29.91 -1
 Street 0902 off 0914
 0930 040/12 winds ACRF

* RUNTIME 5*
 132 dead PB ~~→~~ 

ND BHW
 Drawn 1511