19851009IL_LPS

E.1 Lead Project Scientist (On-Board)

The on-board lead project scientists are responsible for carrying out the scientific mission of their assigned aircraft. (Check off and initial when completed.)

E.1.1 Preflight

✓ 1. Participate in general mission briefing.

✓ 2. Determine specific mission and flight requirements for assigned aircraft.

✓ 3. Determine from CARCAH or field program director whether aircraft has operational fix responsibility and discuss with OAO flight director/meteorologist and CARCAH, unless briefed otherwise by field program director.

✓ 4. Contact HRD members of crew to:

a. Assure availability for mission.

b. Arrange ground transportation schedule when deployed.

c. Determine equipment status.

✓ 5. Meet with OAO flight crew at least 90 minutes before takeoff, provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.

✓ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center.

E.1.2 In-Flight

_____ 1. Confirm from OAO flight director/meteorologist that satellite data link is operative (information).

_____ 2. Confirm camera mode of operation.

_____ 3. Confirm data recording rate.

_____ 4. Complete form E-1.

E.1.3 Postflight

_____ 1. Debrief scientific crew.

_____ 2. Report landing time, aircraft, crew and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to HRD operations center.

_____ 3. Gather completed forms for mission and turn in at the operations center.

_____ 4. Determine next mission status, if any, and brief crews as necessary.

_____ 5. Notify operations center as to where you can be contacted and arrange for any further coordination required.

On-board Lead Project Scientist Checklist

DATE 10/9/85 AIRCRAFT 43RF FLT 851009I

A. Participants

Function	Participant	Function	Participant
Lead Proj. Sci.	R. Black	Gust Probe	
Cloud Physics	Goldenberg	Omegasonde	DeGrammont
AXBT / ~~AXCP~~ ODW	DeGrammont	Sys Eng	Goldstein
Hot Film	—	Data Tech	"
Radar	Griffin	El Tech	
Flt Dir/Met	Davis	Other	Mandelbaum / Lichnor / Ricci Gerrish

Take Off	Location	Landing	Location

B. Past and Forecast Storm Position

Date	Time	Latitude	Longitude	MSLP
10/9/85	0322Z	27°37'	73° 22'	1002 (6 kt)

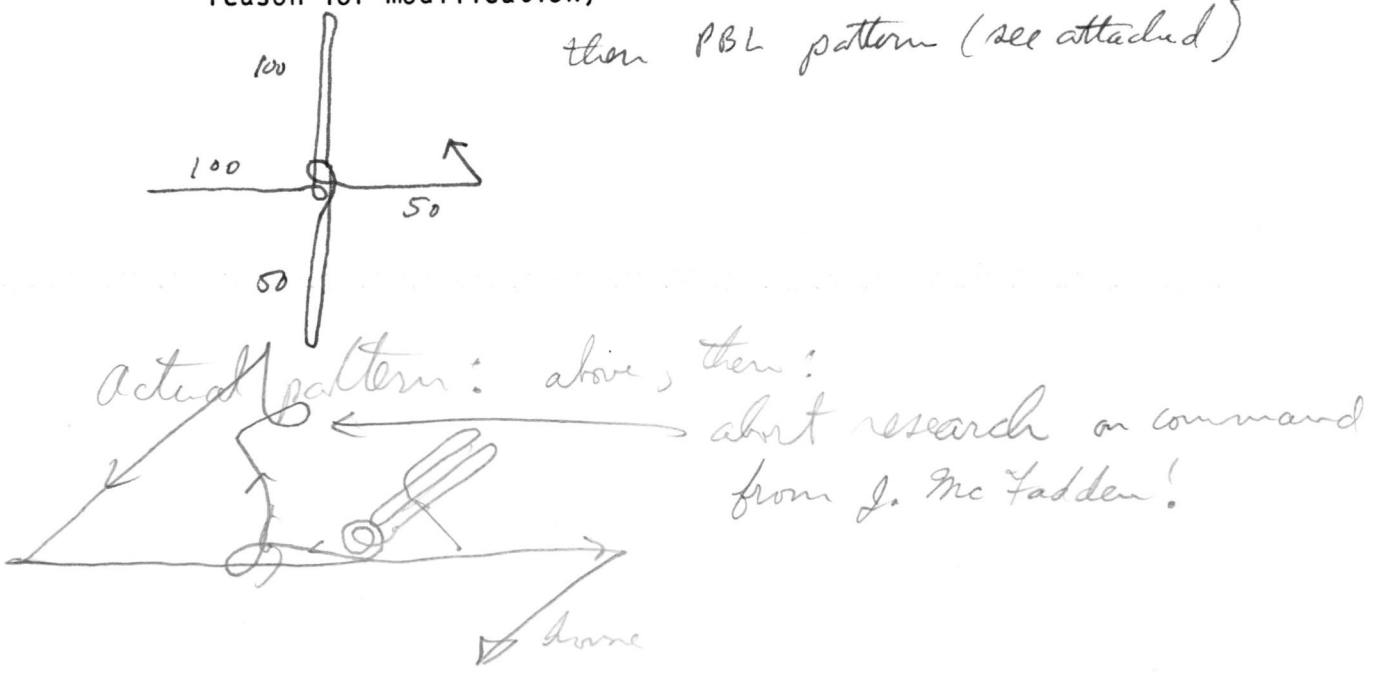
C. Mission Briefing

D. Equipment Status

Equipment	Pre Flt	In Flt	Post Flt	Reports Collected
Aircraft	✓			
Radar	✓			
Cloud Physics	✓			
Data Sys	✓			
Omegasondes	✓			
AXBT/~~AXCP~~	✓			
Gust Probe	—			
Hot Film	—			
Photography Hasselblad	✓			
SFMR	✓			

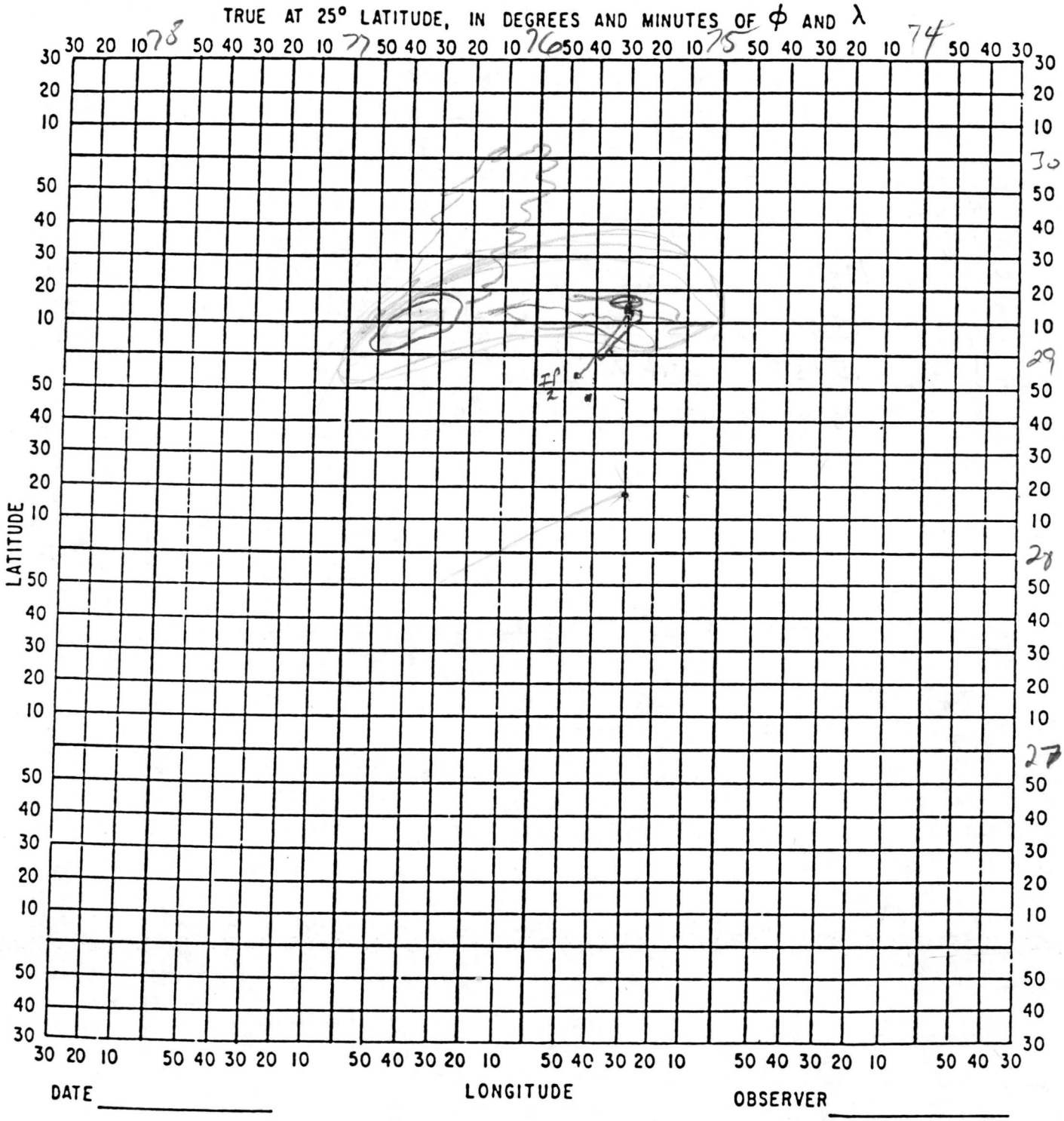
E. Proposed and Actual Flight Patterns (Identify by number and type - give reason for modification)

then PBL pattern (see attached)



HURRICANE RECCO PLOTTING CHART

TRUE AT 25° LATITUDE, IN DEGREES AND MINUTES OF ϕ AND λ



NOTE: Label full degrees according to location of flight area

Form E-1
Page 5 of 5

851009I

DATE 10/09/85 FLIGHT 43RF LPS P. Black

Lead Project Scientist Event Log

EVENT	TIME*	POSITION	COMMENTS**
start Hassel. leveg 19s.	144545	28.49 77.23	
descend	1430	28.3 78.1	RA = 44nm
	1500	28.5 76.2	VMAX = 28 m/s, sfc = 20.6
9	1515	28.10 75.85	PMIN = 1005
9	1655	28.2 76.2	PMIN = 1005

*Log times of all significant altitude changes, turns, and eye fixes
**New altitude, heading, center position, etc.

2

Isabell

DATE 851009I FLIGHT _____ LPS 6 Blocks

PBL expir.

Lead Project Scientist Event Log

EVENT	TIME*	POSITION	COMMENTS**
IP2	172015	29.0 75.75	start turn to 025° 1500 m
I1	1723	29.1 75.68	139° 26.0 17.1 16.8
	1728	29.4 75.54	115 29.0 12.9 16.5
F2	173540	29.43 75.49	q turn + descend
	173154	29.35 75.52	749 m trk 20[illegible]°
			117 30.3 20.3 20.3
turn at 1737	173510		124 31.6 20.7 21.0
I1	173723	29.6 75.68	begin turn + descent
	173840		450 m trk 025°
turn at 1746			125° 30 21.0 23.0 ← Plain Heat
	174520		105° 24.0 22.0 21.8
I2	174610	29.50 75.40	turn + descend
			cloud base 300 m
	174745	29.42 75.46	trk 205 2544 m
	1751		180° 26.0 23.4 23.5
F1	1755		129 28.0 23.8 23.8 clear! great AA state
	1755		begin 20° fixed
			bank turn; tail in 180°
			scan, pointed at 180° (down)
	175858		end of 20° spiral @ 1500 m

*Log times of all significant altitude changes, turns, and eye fixes
**New altitude, heading, center position, etc.

3

DATE 851009I FLIGHT _____ LPS _____

Lead Project Scientist Event Log

EVENT	TIME*	POSITION	COMMENTS**
G	1818	28.28 76.60	PMIN = 1005 mb
I2 1830 begin	18361o	29.04 76.65	hdg 153o mi ~~alt~~ alt 320
			053° 19.5 19.0 16.8
	18393o	29.25 76.84	075 23.7 17.5 16.5
			not much, turn inbound
			& try again at 5K ft
	1900		SHIT! I give up!
			MFE strikes again.
			Terminate experiment!
G	1946	28.3 76.85	PMIN = 1004
			42 coming in at → 2650 7700 (2026Z)
			to start pattern; we
			will quit at end of E-W leg;
			now NHC wants intermediate
			fix! Fix made 15 min ago;
			∴ head home - what a
			waste!
	2015	28.33 75.0	end "mission"

eye at 2110

*Log times of all significant altitude changes, turns, and eye fixes
**New altitude, heading, center position, etc.

4.42
3.49
3.03

1.01

4.39
3.47
3.03

4.42
3.~~39~~
2.97

5.93
17.438

WD WS 212 2.0 RD 26.6

1515Z

4.53
3.57
3.~~48~~

30.7, 30.5 24.4

1600Z

4.22
3.12
2.62

9.00
21.76

WD, WS, RD 110.8, 10.5, 25.8

1615Z

4.46
3.52
3.09

1730

4.22
3.20
2.66

4.51
3.52
3.11

4.45
3.48
3.10

1830Z

4.49
3.45
3.07

3.42
13.01

168., 18., 26.4

2000Z

4.47
3.45
3.07

DATE_____ FLIGHT_____ OPERATOR_____

Formvar Log

ROLL #	TIME ON	TIME OFF	FRAME COUNT AT START	COMMENTS

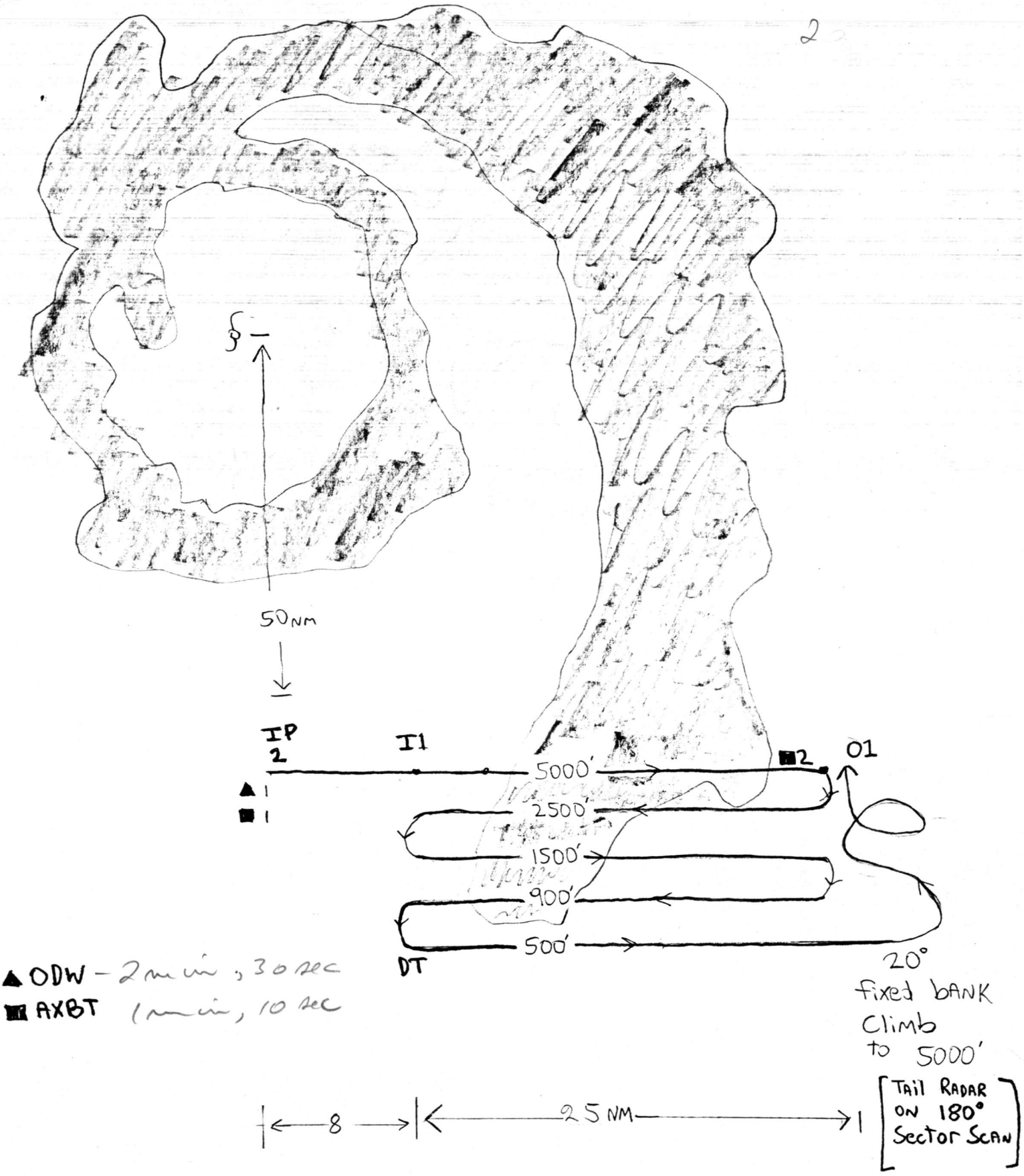


Fig. 2 CROSS BAND PROFILE #1

DT- Doppler Tape Change

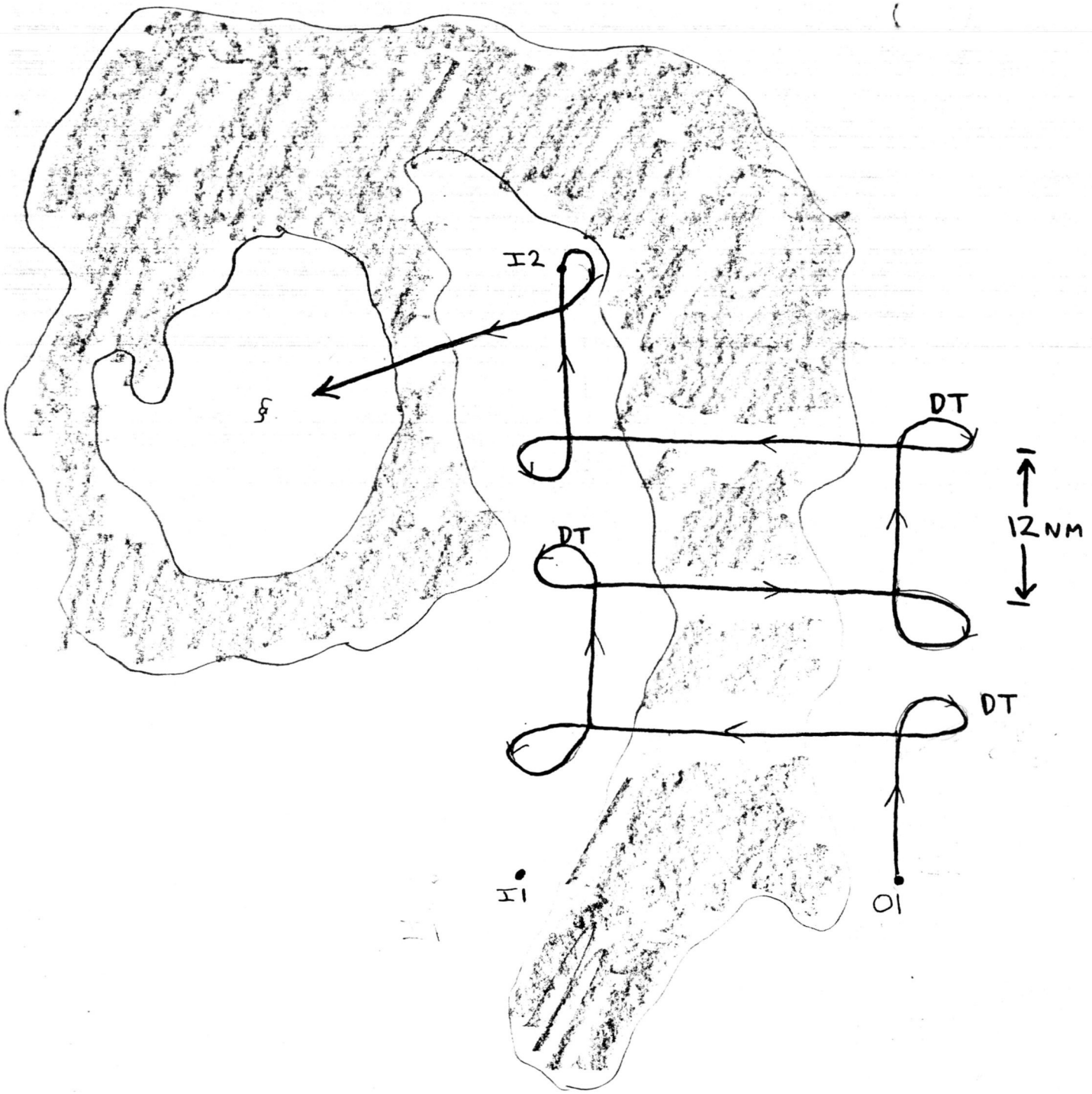


Fig. 3 DOPPLER DOWNWIND PATTERN @ 5000'

■ AXBT

DT - Doppler Tape Change

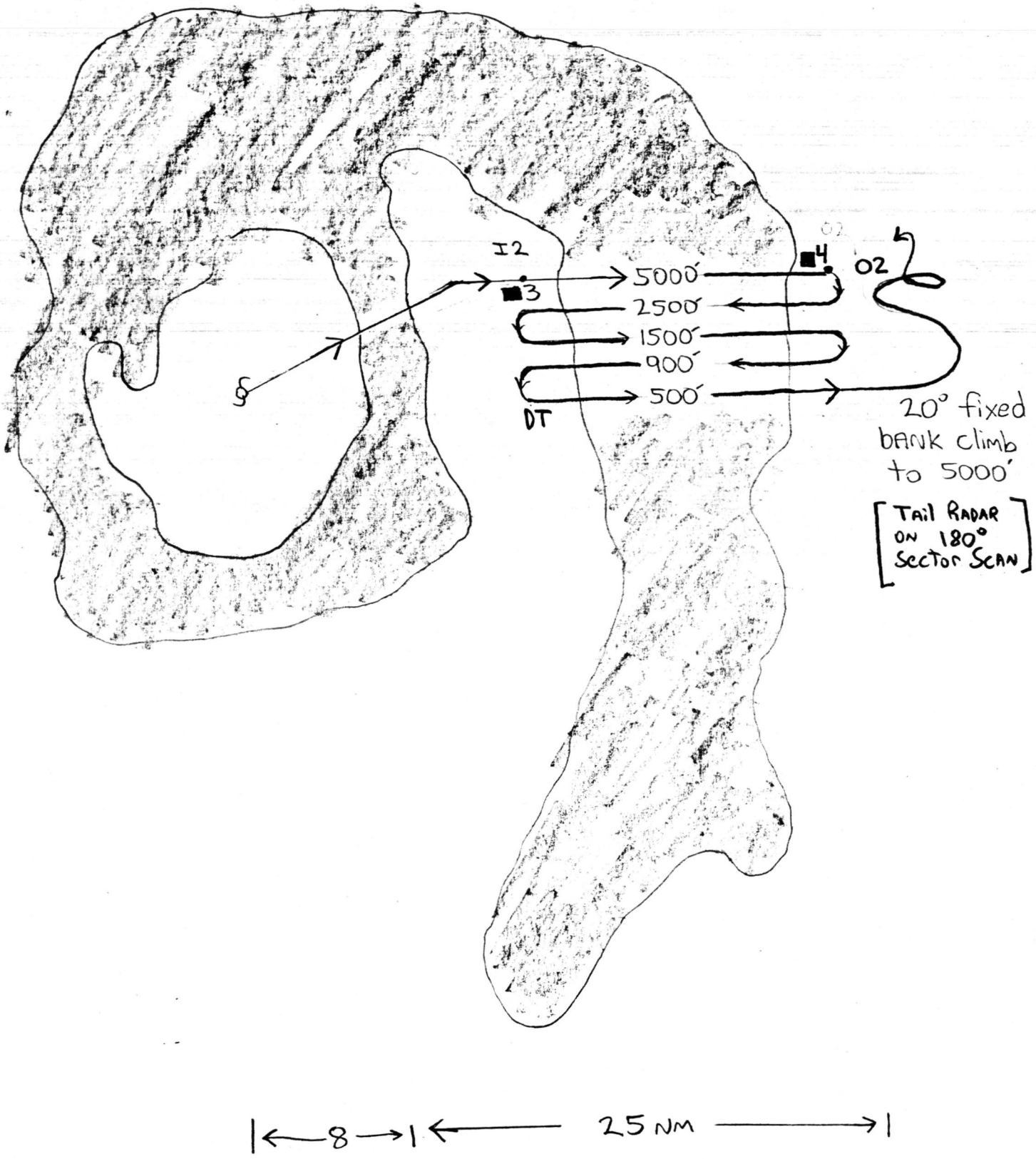


Fig. 4 CROSS BAND PROFILE #2

■ AXBT

DT - Doppler Tape Change

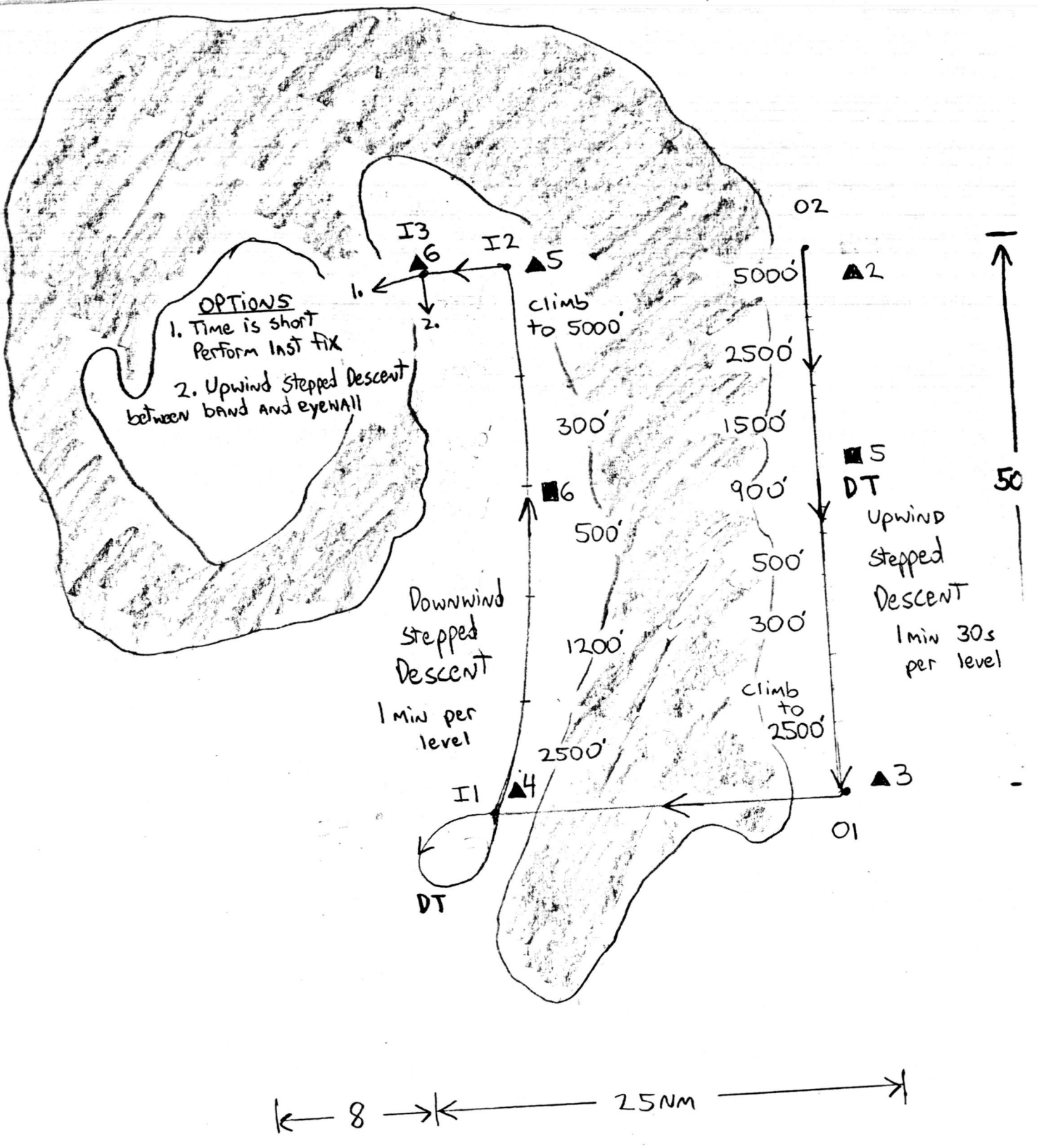


Fig. 5 Stepped Descents

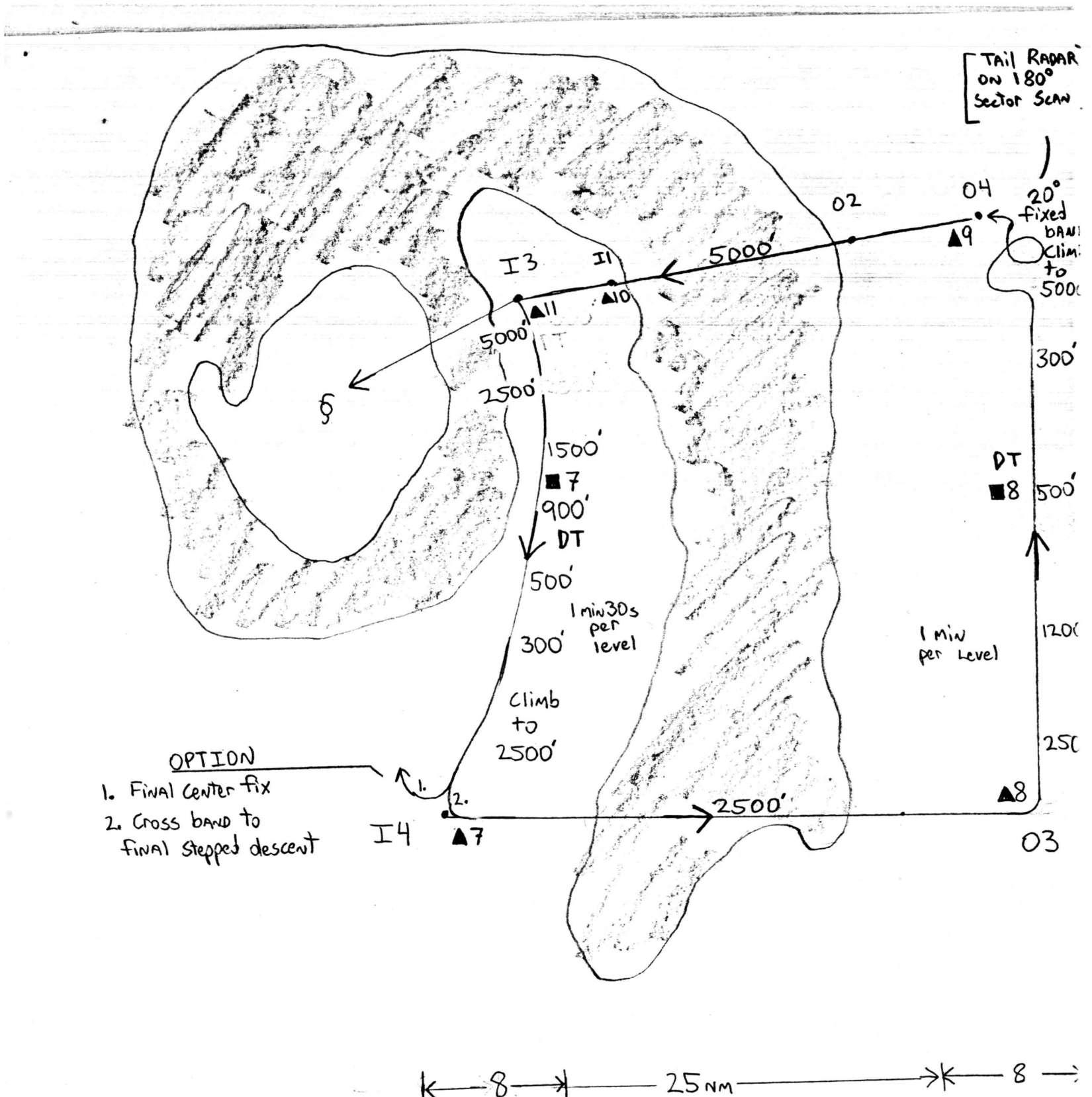


Fig. 6 Stepped Descents