

## **NOTE TO USER - 1977**

To ensure the best reproduction of original source material the following dates have been rescanned at a larger page size to avoid cutting off the top and side edges when scanned at 8 1/2" x 11". When printing the rescanned pages please select 11"x 17" or larger for full size reproduction.

Appended find:

January, 1977

February, 1977

March, 1977

April, 1977

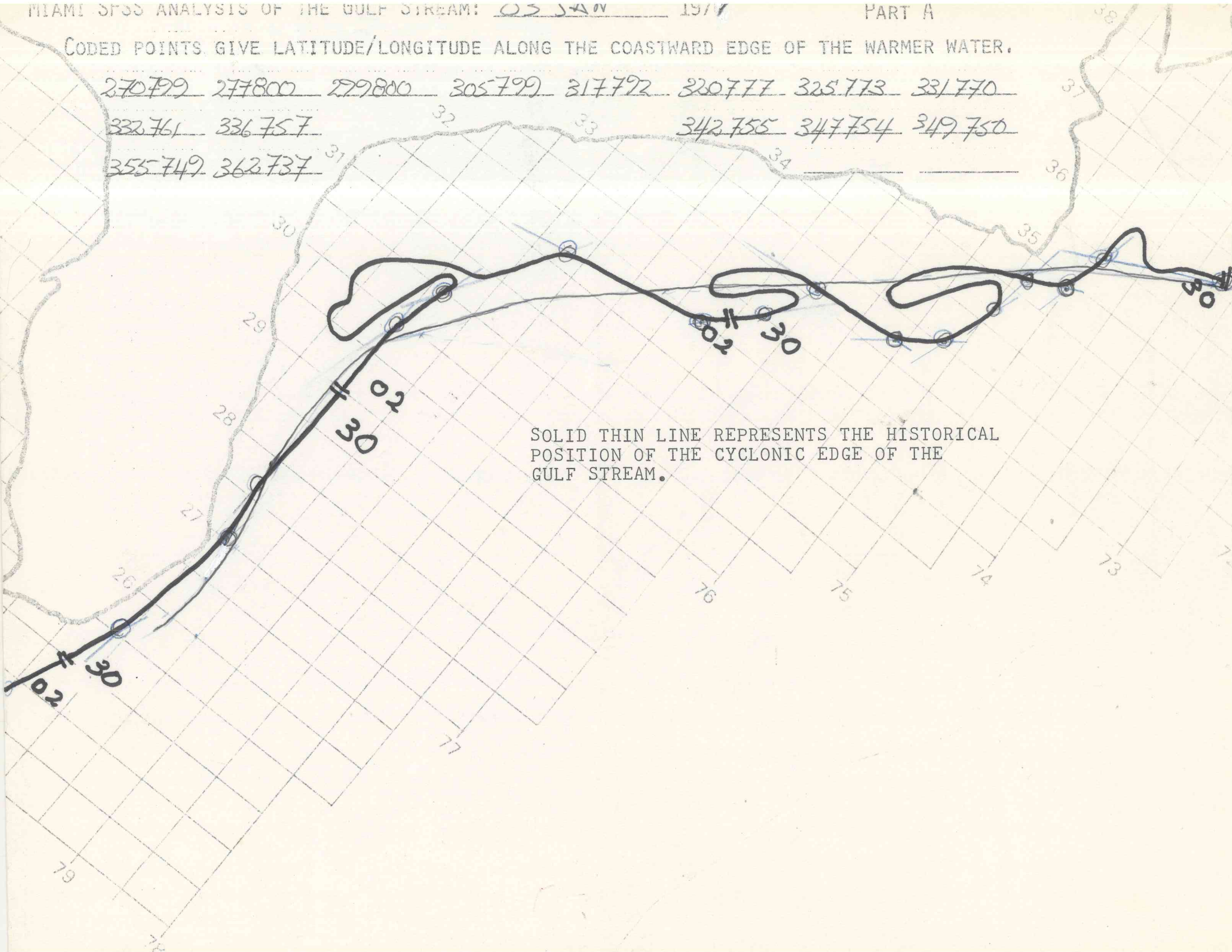
May, 1977

June, 1977

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

270799 277800 279800 305799 317792 320777 325773 331770  
332761 336757 342755 347754 349750  
355749 362737

SOLID THIN LINE REPRESENTS THE HISTORICAL POSITION OF THE CYCLONIC EDGE OF THE GULF STREAM.



GULF STREAM ANALYSIS 03 JANUARY 1977.

THE STREAM IS WITHIN 2/10 DEGREE OF ITS HISTORICAL POSITION FROM 26°N TO 30°N. BETWEEN 30°N AND 31.5°N A DEEP MEANDER KEEPS THE STREAM WEST OF ITS MEAN POSITION BY ABOUT  $\frac{1}{2}$  DEGREE. BETWEEN 32°N AND 34.5°N A DOUBLE MEANDER SYSTEM MOVES THE MAIN FLOW EAST OF THE MEAN POSITION UP TO ONE DEGREE. NORTH OF 35°N THE STREAM IS IN THE MEAN POSITION. THERE HAS BEEN NO DATA NORTH OF 36°N FOR TWO WEEKS.

05 JANUARY 1977

LITTLE CHANGE IS SEEN FOR MAIN STREAM, HOWEVER A COLD EDDY ENTERED AT 24.9N 79.5W HAS APPARENT HISTORY TO JAN. 2, 1977 WITH A SHARP BULGE IN STREAM NEAR 82.5W AND EVENTUAL BREAKOFF. EDDY FOLLOWS STREAM AT SLOWER SPEED, ABT 1.5 KTS .

07 JANUARY 1977

SOUTH OF 28N, POSITION SHOWS LITTLE CHANGE. COLD EDDY NOTED EARLIER NOT FOUND AND PROBABLY WELL MIXED WITH GULF WATER. MEANDER CENTERED AT 29.6N 80.6W HAS GOOD DEFINITION. NORTH OF 31N, ANALYSIS IS FROM VISIBLE SECTIONS AND 24HR OLD DATA.

09 JANUARY 1977

SLIGHT BULGING NEAR 25°N REMAINS OF WAVE PROPAGATING DOWNSTREAM. FROM 26°N TO 28°N THE STREAM IS WEST OF THE HISTORICAL POSITION. FROM 29°N TO 32°N A SERIES OF MEANDERS HOLDS THE STREAM  $\frac{3}{4}$  DEGREE WEST OF THE HISTORICAL POSITION. FROM 32°N THROUGH 35°N THE STREAM IS SLIGHTLY EAST OF THE MEAN POSITION ALTHOUGH A LARGE INTRUSION OF COLD WATER NEAR 33°N MOVES THE EDGE NEARLY ONE DEGREE EASTWARD. NORTH OF 35°N THE STREAM IS NORTH (SHOREWARD) OF THE MEAN POSITION, TO 37.5°N.

12 JANUARY 1977

NEW WAVE DEVELOPMENT NR 32.5N 77W FROM DOWNSTREAM BULGE SEEN ON 09 JAN. SMALL WAVES NR 33.8N 76.5W AND 34.3N 75W ARE PROPAGATING TO THE NE.

14 JANUARY 1977

NO DATA FOR THIS DATE, OUTPUT OF PROG FRM 13 JAN ANALYSIS SMALL WAVES PROGED TO CONTINUE DOWNSTREAM, LARGE EDDY NR 33.2N 77.5W MAY BE ABOUT TO BREAK OFF.

17 JANUARY 1977.

STREAM NEAR THE NORMAL POSITION TO 29°N. FROM 29°N TO 32°N THE STREAM CONTINUES TO BE  $\frac{1}{2}$ °W OF THE MEAN POSITION. A LARGE MEANDER NEAR 33°N MOVES THE STREAM SEAWARD OF THE MEAN POSITION. NO DATA N OF 34°N.

19 JANUARY 1977

STREAM CONTINUES WEST OF THE MEAN POSITION THROUGHOUT THE LENGTH OF THE ANALYSED DATA.

21 JANUARY 1977

THE STREAM IS SLIGHTLY WEST OF THE MEAN POSITION TO 27.7°N, WHERE A SMALL ~~END~~ MEANDER MOVES THE STREAM SEAWARD.



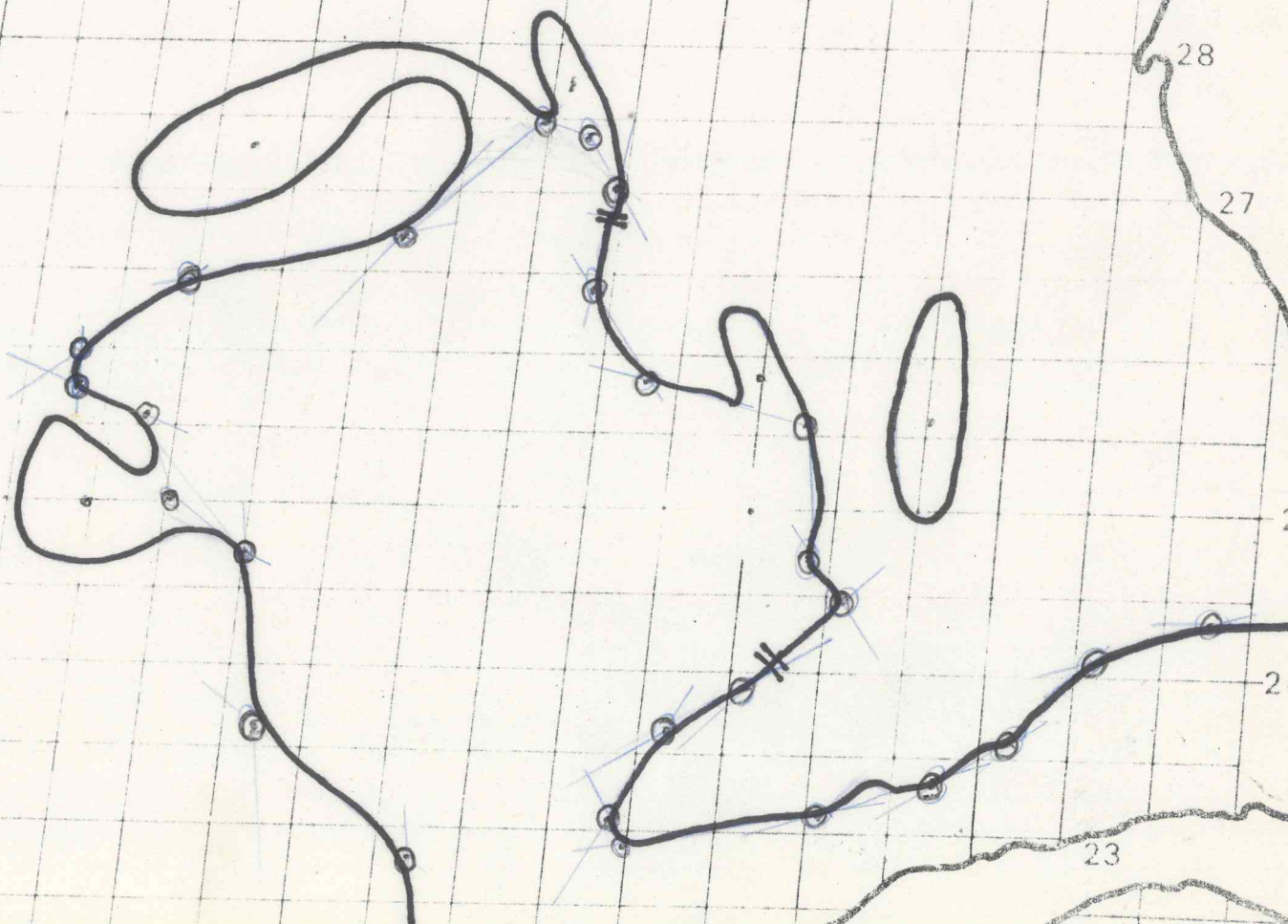
CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223867 228868 236878 247880 250885 256887 257892 260892 264885 267873  
 275865 274862 270860 264861 258857 256847 247846 245844 239849 236854  
 231856 229855 231844 233837 236834  
 241829 244822 244815 //

DETACHED MEANDERS  
 ALONG OUTSIDE OF LOOP  
 CENTERED AT  
 250890/274882/277864/  
 259850//  
 WARM EDDY CENTERED  
 AT 256840

90°

85°

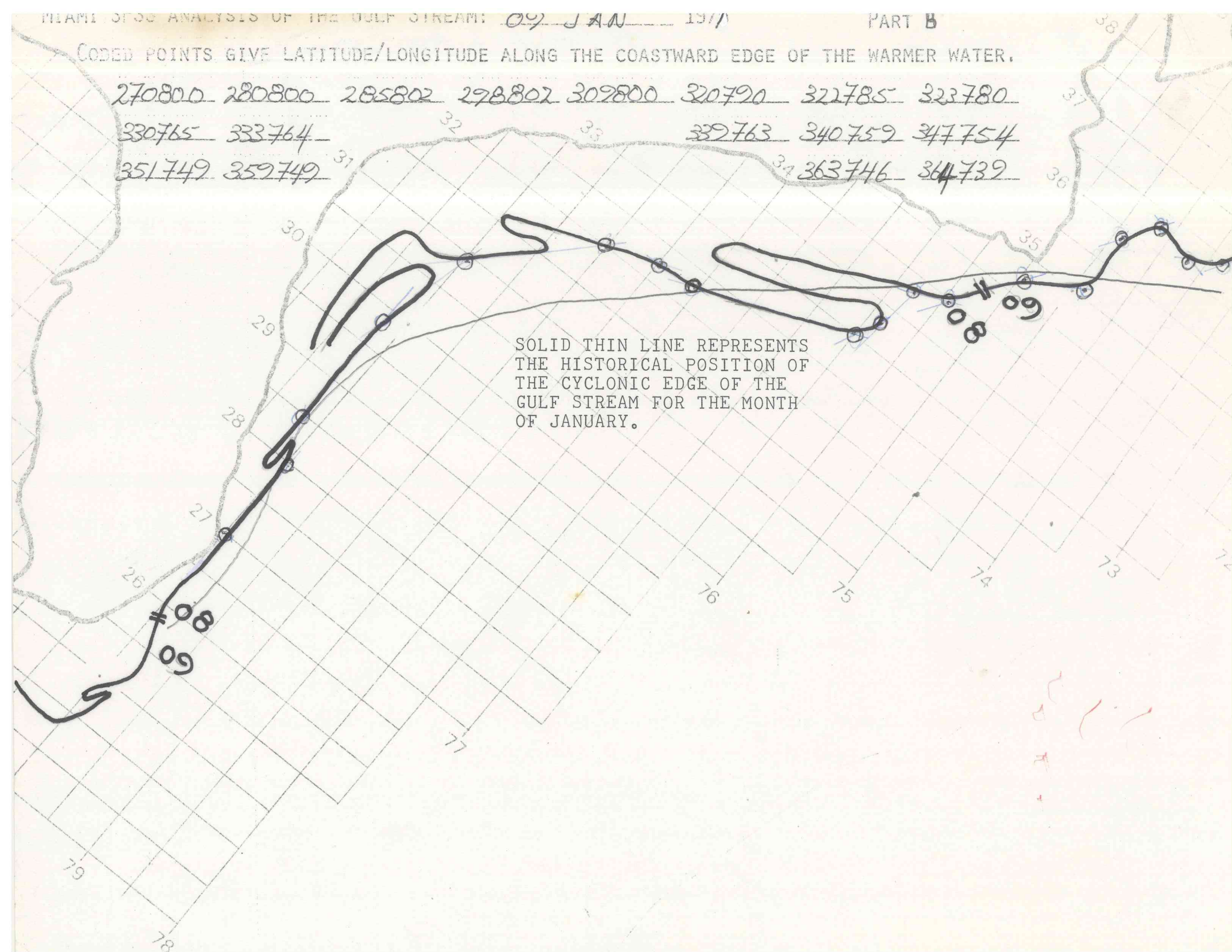




CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

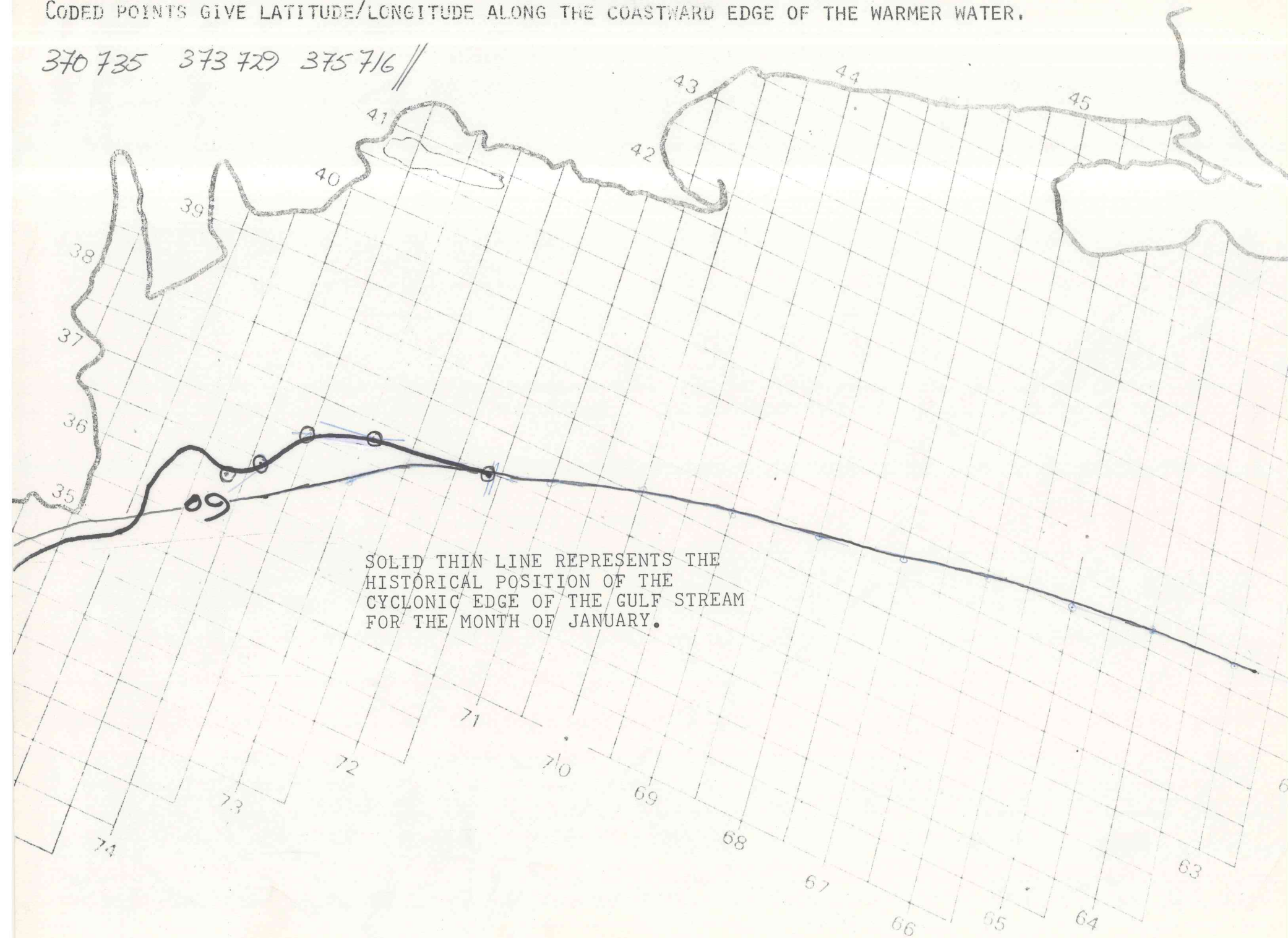
270800 280800 285802 298802 309800 320790 322785 323780  
 330765 333764 339763 340759 347754  
 351749 359749 363746 364739

SOLID THIN LINE REPRESENTS  
 THE HISTORICAL POSITION OF  
 THE CYCLONIC EDGE OF THE  
 GULF STREAM FOR THE MONTH  
 OF JANUARY.



CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

370 735 373 729 375 716 //





MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 12 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223 867 230 869 237 877 249 883 262 889 266 875 270 869 273 863 270 859 257 855  
252 848 247 844 240 843 235 845 231 840 235 830 240 825 241 820 // \_\_\_\_\_

Detached Meanders Along  
outside of Loop centered AT:  
251 892 / 275 883 / 275 862 /  
257 845 //

Cold Eddy centered  
AT 226 848 with Diameter  
of 60 Km.

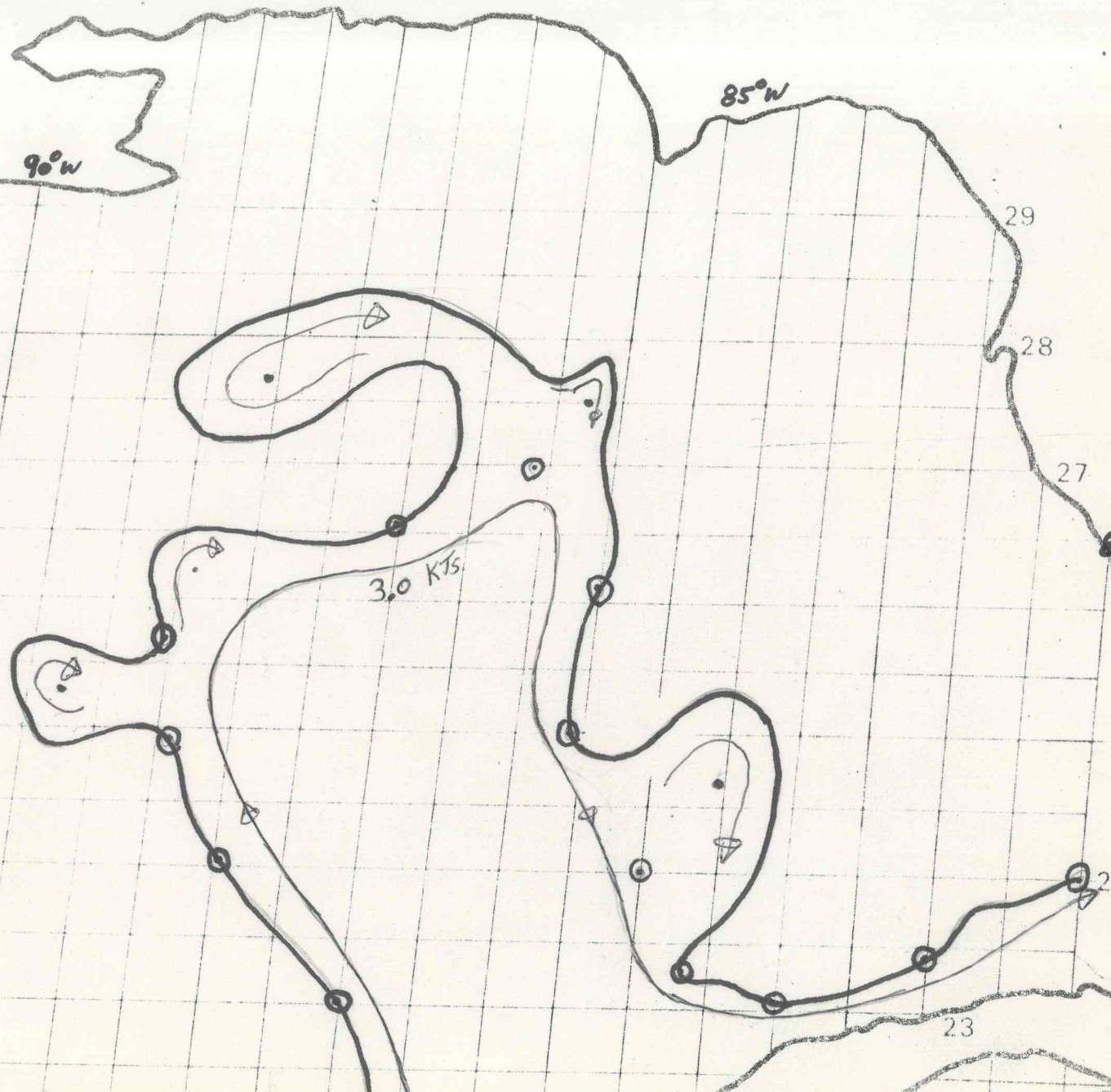


CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

222 867 230 870 240 880 249 884 257 886 265 870 270 861 261 855 250 856 240 850  
233 847 231 840 234 830 240 820 //

Detached Meanders  
 Along outside of Loop  
 Current centered at

253 893 / 276 881  
275 858 / 247 846 //





MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 17 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223867 228869 241881 254885 264886 265885 265881 264875 265868 274862  
275859 265854 256856 249856 246852 252846 253842 251840 247840 232845  
230837 233825 237822

238815 //

90°W

85°W

DETAILED MEANDERS  
ALONG OUTSIDE OF  
LOOP CENTERED AT  
254891 / 277878 //

3-3½ kt

29

28

27

2

23

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

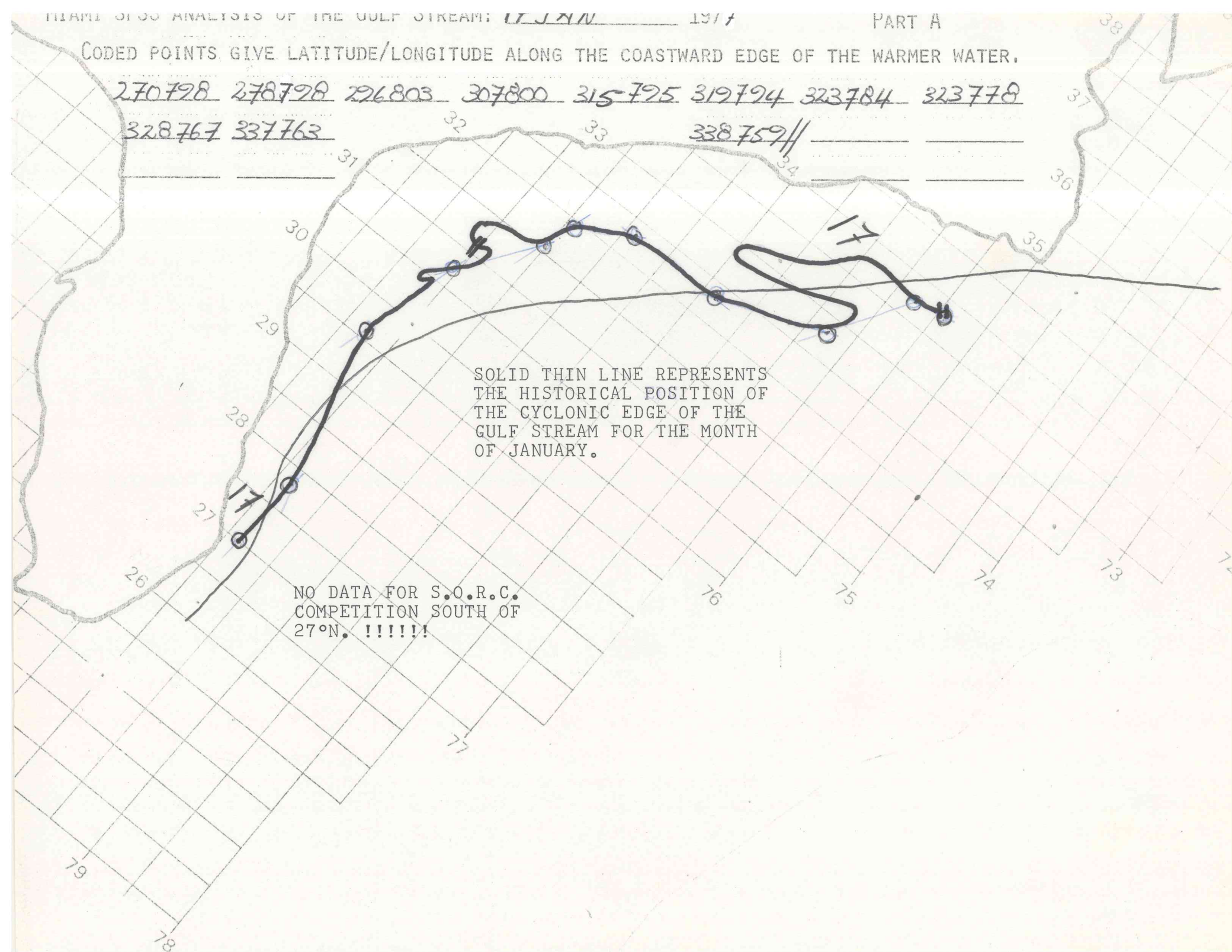
270728 278728 296803 307800 315725 319724 323784 323778

328767 337763

338759//

SOLID THIN LINE REPRESENTS  
THE HISTORICAL POSITION OF  
THE CYCLONIC EDGE OF THE  
GULF STREAM FOR THE MONTH  
OF JANUARY.

NO DATA FOR S.O.R.C.  
COMPETITION SOUTH OF  
27°N. !!!!!!!





CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223866 230870 238880 252885 265885 267882 265874 265865 270864 275856  
270853 246855 244854 244850 250847 252843 249839 231846 230836 235822  
238820 238815 \_\_\_\_\_

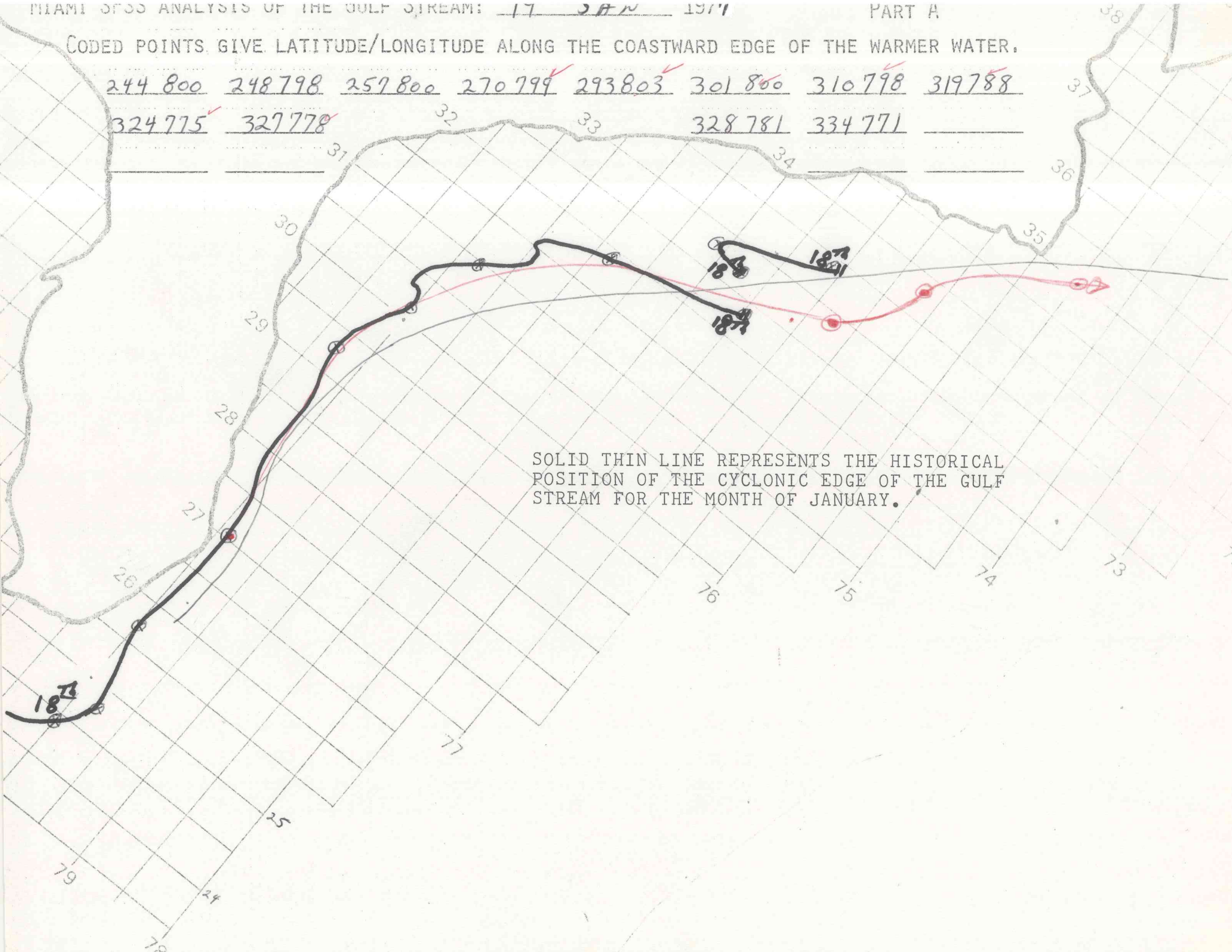
center of meanders  
 along outside of  
 loop located at  
 259891/ 276876

ANALYSIS BASED  
 ON FORECAST  
 MOVEMENT OF  
 POSITION OF LOOP  
 CURRENT.



CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

244 800 248 798 257 800 270 799 293 803 301 800 310 798 319 788  
324 775 327 778 328 781 334 771



SOLID THIN LINE REPRESENTS THE HISTORICAL POSITION OF THE CYCLONIC EDGE OF THE GULF STREAM FOR THE MONTH OF JANUARY.



# GULF OF MEXICO LOOP CURRENT ANALYSIS

19 JANUARY 1977

ANALYSIS BASED SOLELY ON FORECAST MOVEMENT FROM PREVIOUS DAY.

21 JANUARY 1977.

$\frac{3}{4}$  OF THE LOOP IS VISIBLE TODAY AFTER NEARLY ONE WEEK OF CLOUDY SKIES. THE MAJOR MEANDERS HAVE PROPAGATED DOWNSTREAM QUITE RAPIDLY. A NEW MEANDER APPEARS TO BE FORMING NEAR 26N89W.

24 JANUARY 1977

THE MAJOR OBSERVATION IS THE LARGE WAVE WHICH ALMOST COMPLETELY BLOCKS THE STRAITS OF FLORIDA NEAR 83°W. THE RATE AT WHICH THESE WAVES ARE PROPAGATING AROUND THE LOOP SUGGESTS THAT THEY ARE NOT VERY DEEP, ONLY OF THE ORDER OF 10-20 METRES.

~~26~~-JANUARY--1977

WAVE MENTIONED IN 24 JAN ANALYSIS STILL REMAINS 82 TO 83 W WITH WEAKENING OF NW SECTION AND THERMAL GRADIENT DROPPING TO NEAR 90W. COLD EDDY CENTERED AT 24.6 N 85.4W MOVING SE WITH FLOW AT .5 KNTS.

28 JANUARY 1977

NO SIGNIFICANT CHANGES CAN BE SEEN IN THE SHAPE OR POSITION OF THE LOOP IN THE PAST TWO DAYS.

31 JANUARY 1977

A LARGE MEANDER HAS DEVELOPED NEAR 26°N 88.5°W. THE WAVE IN THE FLORIDA STRAITS HAS MOVED VERY SLOWLY DOWNSTREAM OVER THE PAST WEEK. OTHERWISE, NO SIGNIFICANT CHANGES.

02 FEBRUARY 1977

EXTENSIVE CLOUD COVER PAST TWO DAYS HAS PREVENTED A CLEAR LOOK A LOOP. TODAY'S ANALYSIS IS A FORECAST OF FEATURE MOVEMENT.

04 FEBRUARY 1977

CONTINUING CLOUD COVER HAS PREVENTED ANY CURRENT ANALYSIS...EXCEPT IN THE STRAITS OF FLORIDA. TODAY'S ANALYSIS IS A FORECAST OF FEATURE MOVEMENT.

09 FEBRUARY 1977

WESTERN PORTION OF LOOP NOT SEEN W OF 87°W. FEATURES CONT TO MOVE DOWNSTREAM ALONG E EDGE OF LOOP. WAVE WHICH WAS NEAR 26°N APPEARS TO HAVE DISAPPEARED. CANNOT FIND COLD EDDY WHICH SHOULD HAVE BEEN LEFT.

11 FEBRUARY 1977

LARGE WAVE NR 25.5°N 87°W NOT SEEN PREVIOUSLY...IF VERIFIED THIS SHOWS THAT LOOP IS CLOSING OFF. SUDDEN APPEARANCE OF THIS WAVE MAKES IT SOMEWHAT SUSPECT!!!!

14 FEBRUARY 1977

NO NEW DATA SINCE 11 FEB.

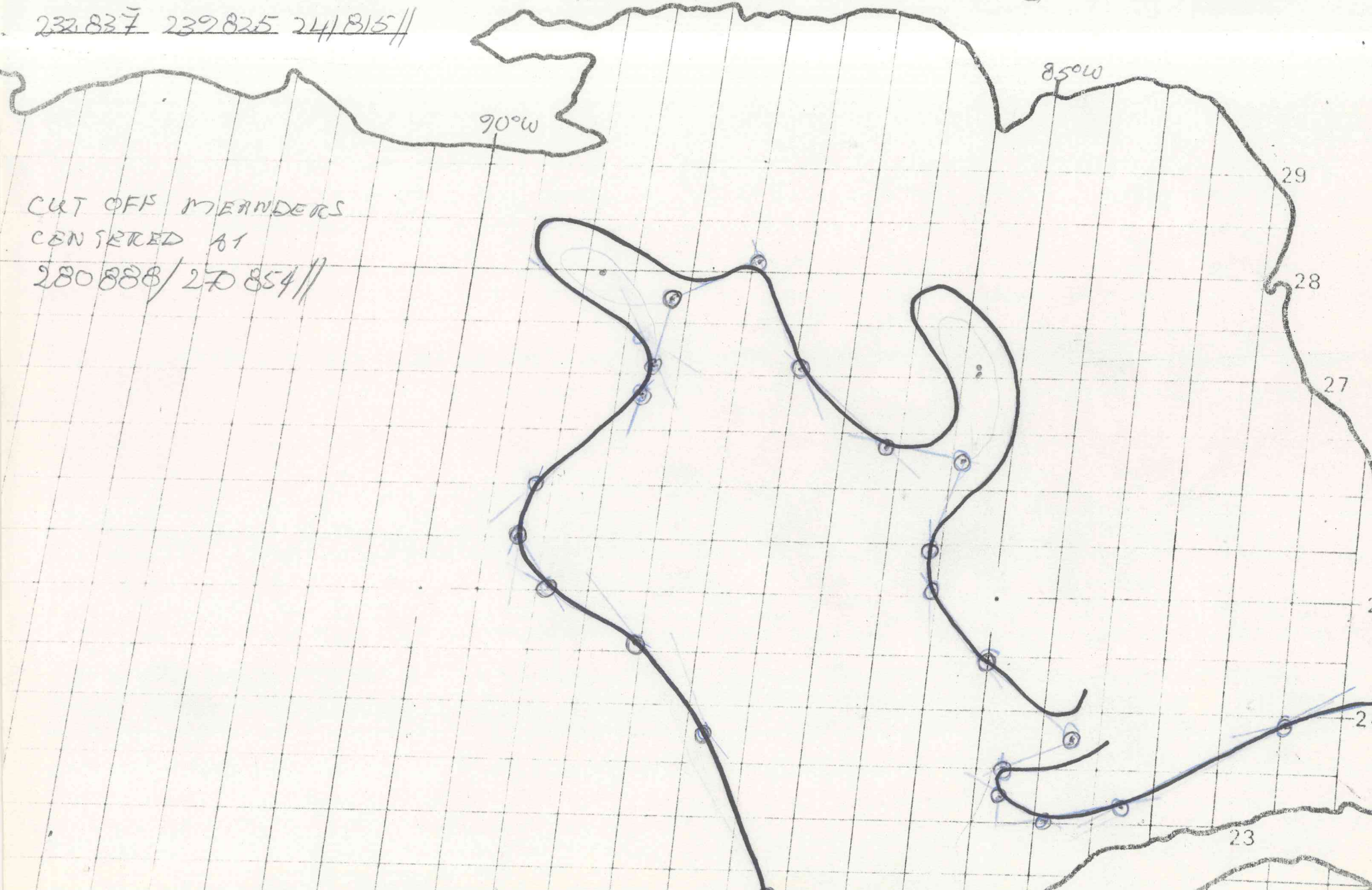
16 FEBRUARY 1977

POSITIONS SEEN THRU A FEW BREAKS IN CLOUDS GENERALLY CONFIRM POSITIONS OF 11 FEBRUARY 1977

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223866 238874 246881 250889 255892 260891 268883 271882 278883 281875  
271869 264861 263854 254856 250855 245850 238843 235848 232848 230844  
232837 239825 241815 //

CUT OFF MEANDERS  
 CENTERED AT  
280888 / 270854 //





CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

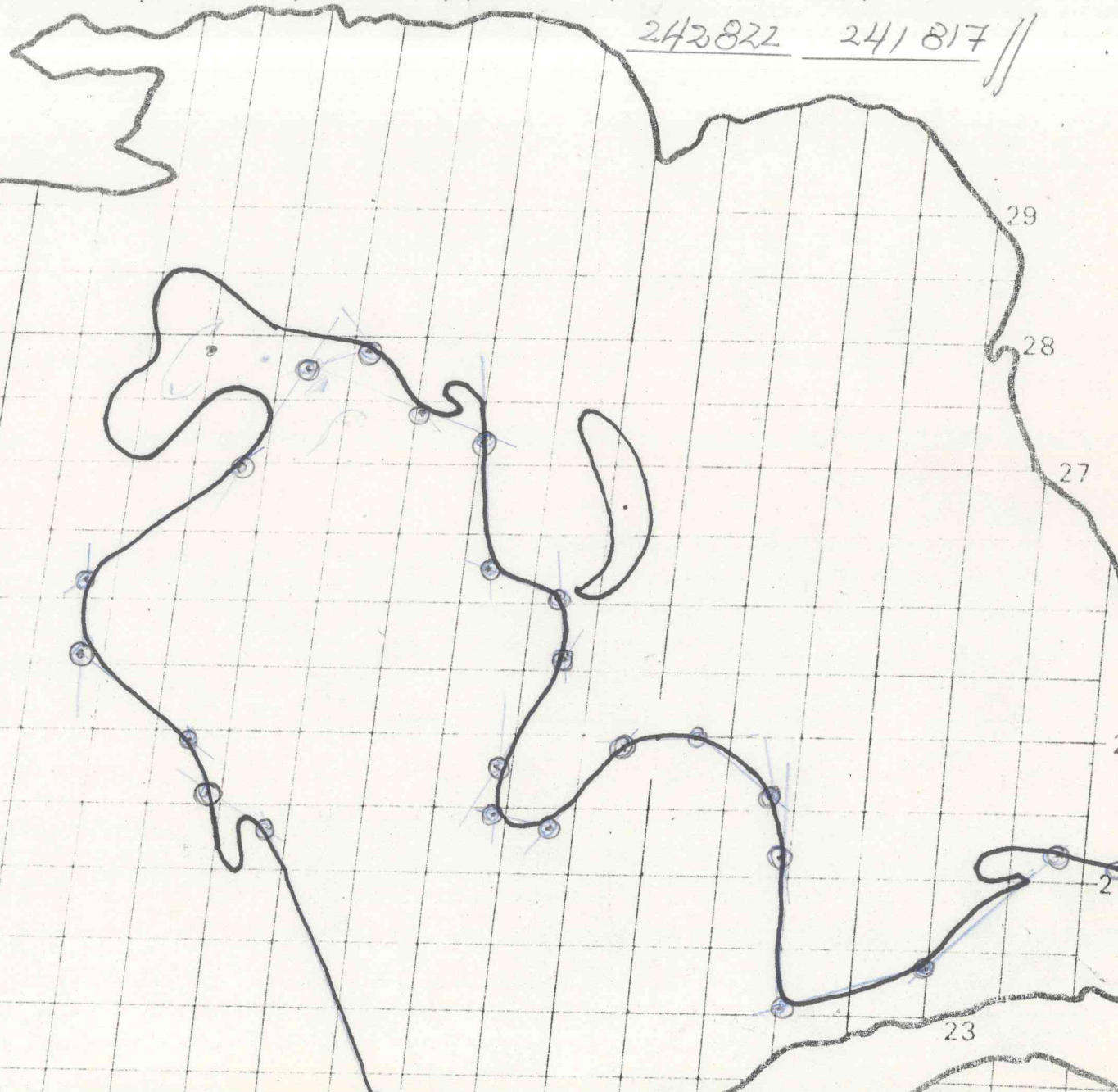
270799 275800 284799 292802 297802 //



CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

222867 244877 246881 249883 256892 262892 270882 278878 279874 274870  
272865 262863 260858 256857 248861 245861 244857 249852 250847 246842  
241841 230840 234830 242822 241817 //

DETACHED MEANDERS  
 CENTERED AT  
279885 / 267854 //

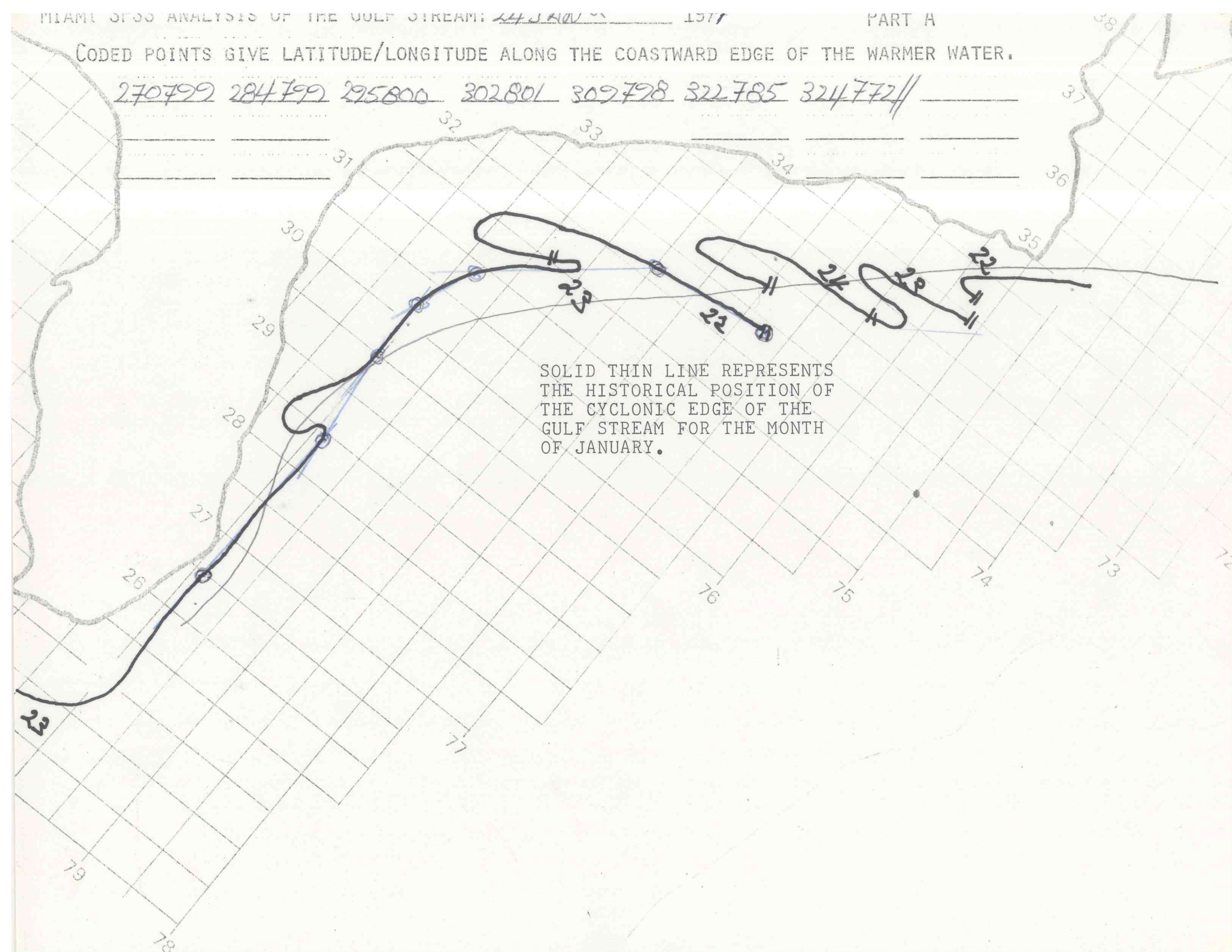




CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

270799 284799 295800 302801 309798 322785 324772//

SOLID THIN LINE REPRESENTS  
THE HISTORICAL POSITION OF  
THE CYCLONIC EDGE OF THE  
GULF STREAM FOR THE MONTH  
OF JANUARY.



## GULF STREAM ANALYSIS

24 JANUARY 1977

THE STREAM ~~IS~~ NEAR THE MEAN POSITION TO  $29.5^{\circ}\text{N}$  AFTER WHICH IT IS NEARLY 30 MI WEST, TO  $32^{\circ}\text{N}$ . NORTH OF  $32^{\circ}\text{N}$  A SERIES OF MEANDERS ARE SEEN, HOWEVER CLOUD COVER PREVENTS OBSERVING JUST HOW FAR OFFSHORE THEY MOVE THE STREAM.

26 JANUARY 1977

MUCH THE SAME AS 24 JAN WRITE UP WITH THREE SMALL EDDIES PROPOGATING DOWNSTREAM BETWEEN  $28$  TO  $30^{\circ}\text{N}$ .

28 JANUARY 1977

THE STREAM CONTINUES ABOUT 30 MI WEST OF THE MEAN POSITION TO  $32^{\circ}\text{N}$  AFTER WHICH A SERIES OF SMALL MEANDERS MOVE THE EDGE EASTWARD UP TO 30 MI TO  $36^{\circ}\text{N}$ . NORTH OF  $36.5^{\circ}\text{N}$  A LARGE MEANDER APPEARS TO HAVE FORMED.

31 JANUARY 1977

THE STREAM CONTINUES ABOUT 30 MI WEST OF THE MEAN POSITION FROM  $29^{\circ}\text{N}$  TO  $32^{\circ}\text{N}$  NORTH OF WHICH A SERIES OF SMALL MEANDERS MOVE THE THERMAL BOUNDARY EAST OF THE MEAN POSITION BY ABOUT 15 MI.

02 FEBRUARY 1977

~~EXTENSIVE CLOUD COVER PREVENTS ANY ANALYSIS LATER THEN 31 JAN77~~  
THE STREAM CONTINUES ABOUT 15 MI WEST OF THE MEAN FEBRUARY POSITION FROM  $29^{\circ}\text{N}$  TO ABOUT  $31.5^{\circ}\text{N}$ . NORTH OF  $32^{\circ}\text{N}$  THE STREAM IS ABOUT 10 MI EAST OF THE MEAN POSITION.

04 FEBRUARY 1977

CLOUD COVER PREVENTS ANY ANALYSIS THIS DATE.

07 FEBRUARY 1977

STREAM IS SLIGHTLY EAST OF THE MEAN POSITION ALONG FLA COAST TO  $29^{\circ}\text{N}$ . BETWEEN  $29^{\circ}\text{N}$  AND  $32^{\circ}\text{N}$  STREAM IS SLIGHTLY WEST OF MEAN POSITIION.

A DEVELOPING MEANDER BETWEEN  $32^{\circ}\text{N}$  AND  $33^{\circ}\text{N}$  MOVES THE STREAM WELL TO THE EAST OF THE MEAN POSITION. BETWEEN  $71^{\circ}\text{W}$  AND  $73^{\circ}\text{W}$  THE STREAM BULGES SHOREWARD NEARLY ONE DEGREE FROM THE MEAN POSITION.

09 FEBRUARY

MEANDER NEAR  $32.5^{\circ}\text{N}$  HAS MOVED DOWNSTREAM ABOUT 0.4 KT PAST TWO DAYS. LARGE MEANDER NEAR  $71.5^{\circ}\text{W}$  IS WELL SEEN. STREAM SEEN E OF  $71^{\circ}\text{W}$  FOR FIRST TIME INM NEARLY A MONTH!!!

14 FEBRUARY 1977

ONLY CURRENT DATA E OF  $75^{\circ}\text{W}$ . STREAM IS GENLY E OF MEAN POSITION TO  $73.5^{\circ}\text{W}$ , NORTH OF THE MEAN POSITION BTN  $73^{\circ}\text{W}$  AND  $70.5^{\circ}\text{W}$ , SOUTH OF THE MEAN POSITION BTN  $70^{\circ}\text{W}$  AND  $66^{\circ}\text{W}$ , AND SLIGHTLY SOUTH OF THE MEAN EAST OF  $65^{\circ}\text{W}$ .

16 FEBRUARY 1977

DATA FROM FEB 15/16 SHOWS THE STREAM IS EAST OF THE MEAN POSITION FROM  $32^{\circ}\text{N}$  THRU  $36^{\circ}\text{N}$ . A LARGE WAVE MOVES THE STREAM NORTH AT  $70^{\circ}\text{W}$  AND SOUTH AT  $69^{\circ}\text{W}$ . NO DATA SOUTH OF  $29^{\circ}\text{N}$ .



CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

222869 241877 247884 255886 260897 274896 275892 282884 280878 281873  
269865 265865 260860 249857 243857 242854 240845 246836 241833 235831  
235824 238815//

DETACHED MEANDERS  
 ON OUTSIDE EDGE OF  
 LOOP CENTERED AT  
286884/253856//



CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

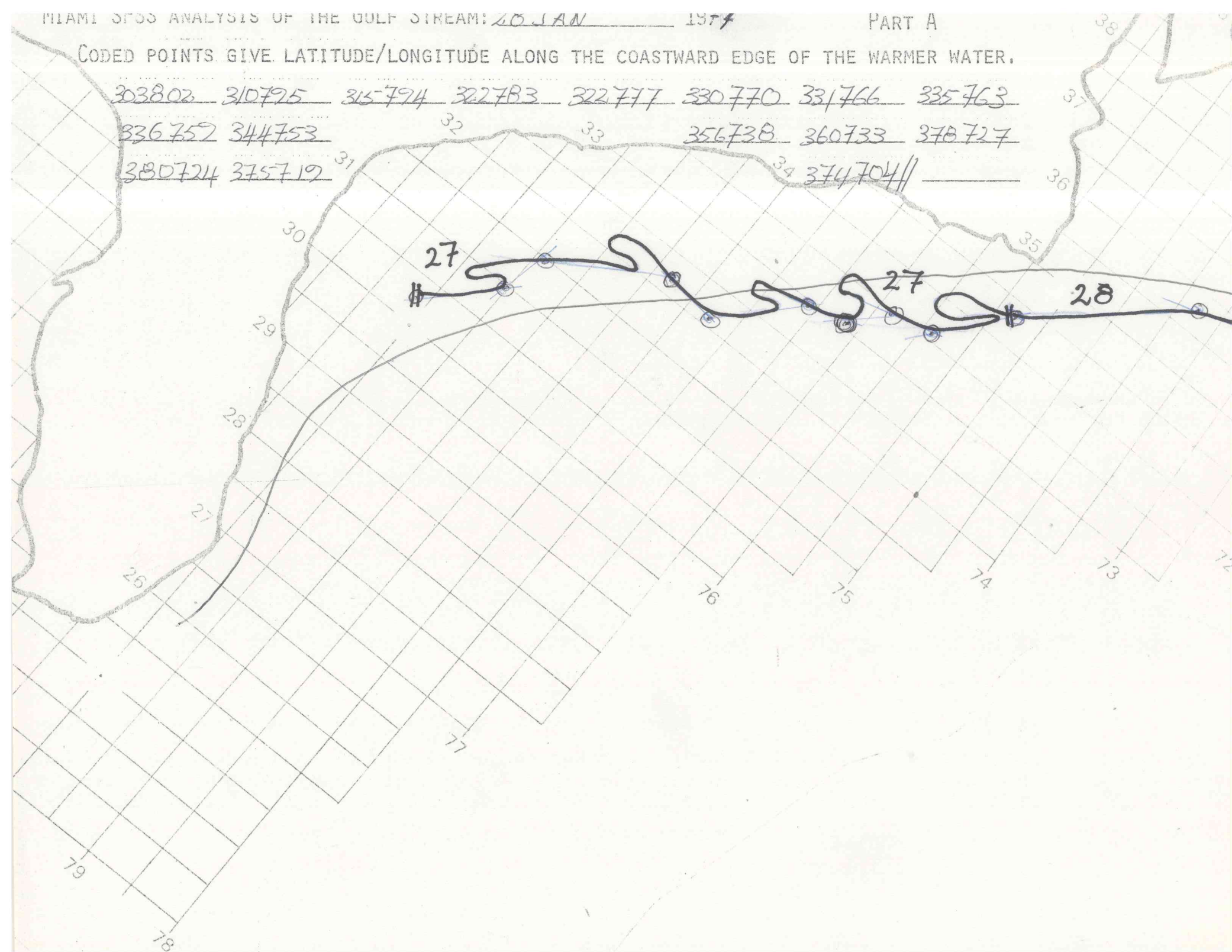
303802 310795 315794 322783 322777 330770 331766 335763

336759 344753

356738   360733   378727

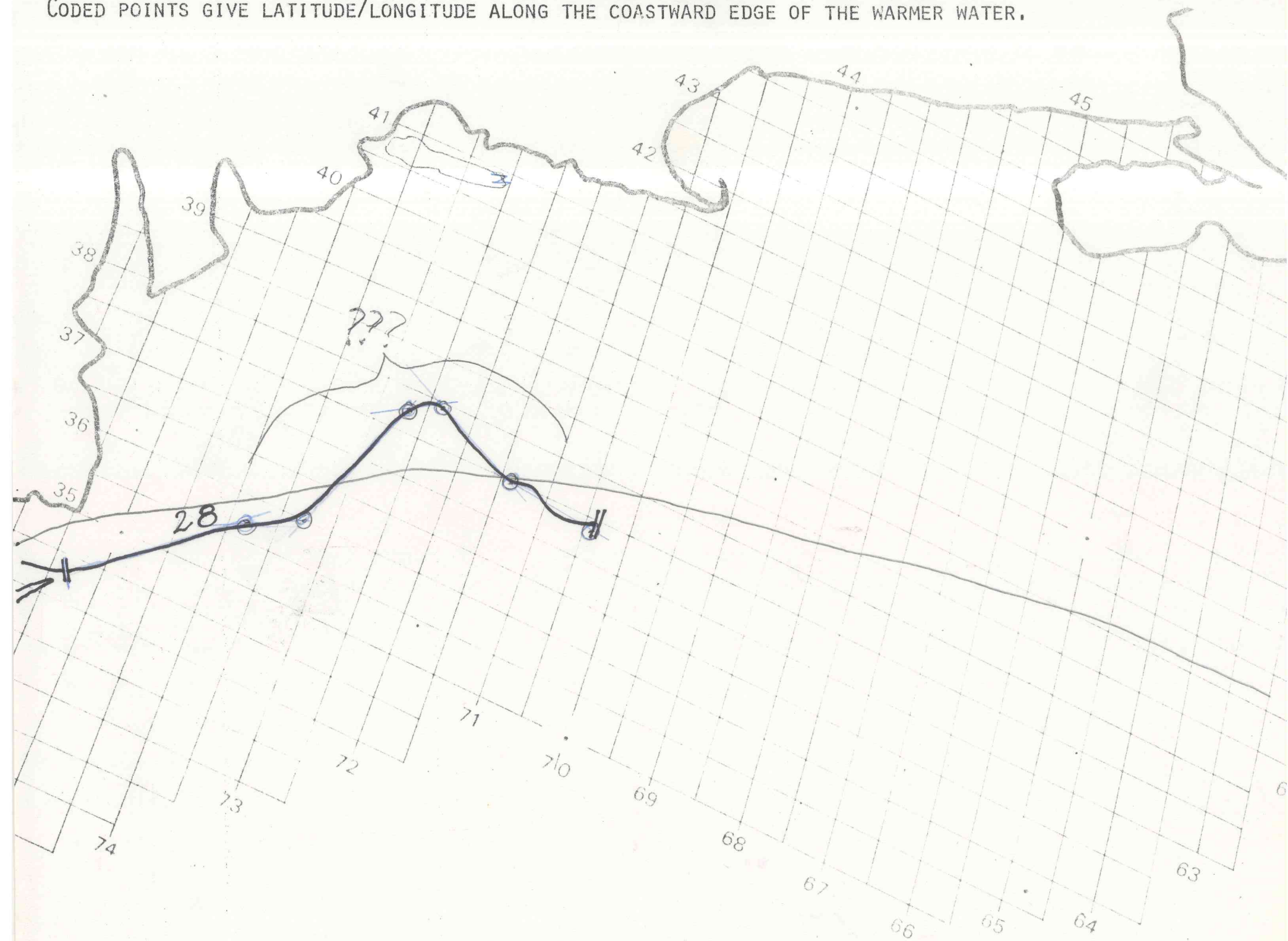
380724 375719

37470411





CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.



CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223869 236874 247881 252887 260885 267882 270883 275885 282883 281872  
 283873 281868 277865 265864 259859 250858 244857 242854 247846 247840  
 24283 235829 234825 239818//

DETACHED MEANDERS  
 ALONG OUTSIDE EDGE  
 OF LOOP CENTERED  
 AT 268893/285883/  
 254856//

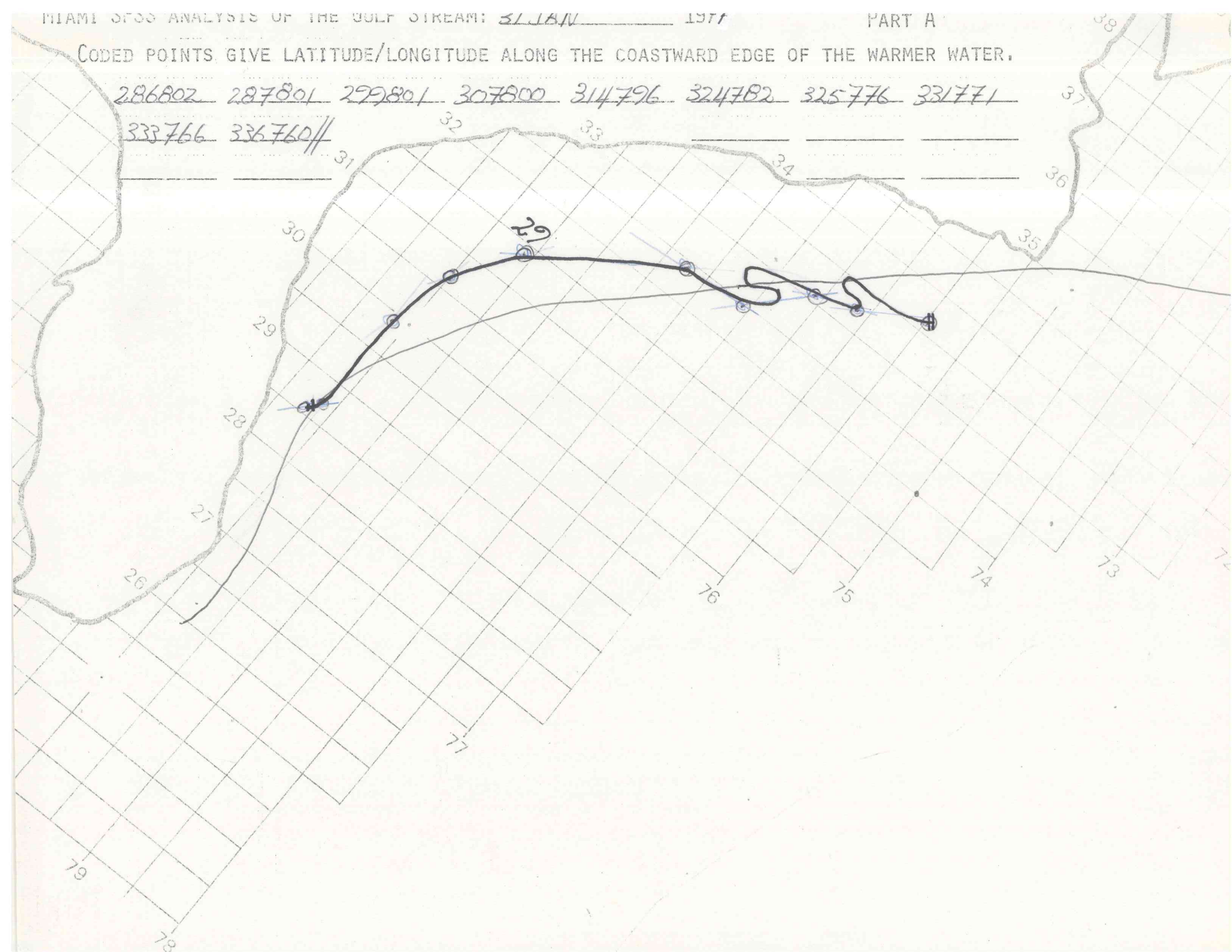




CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

286802 287801 299801 307800 314796 324782 325776 331771

333766 336760//



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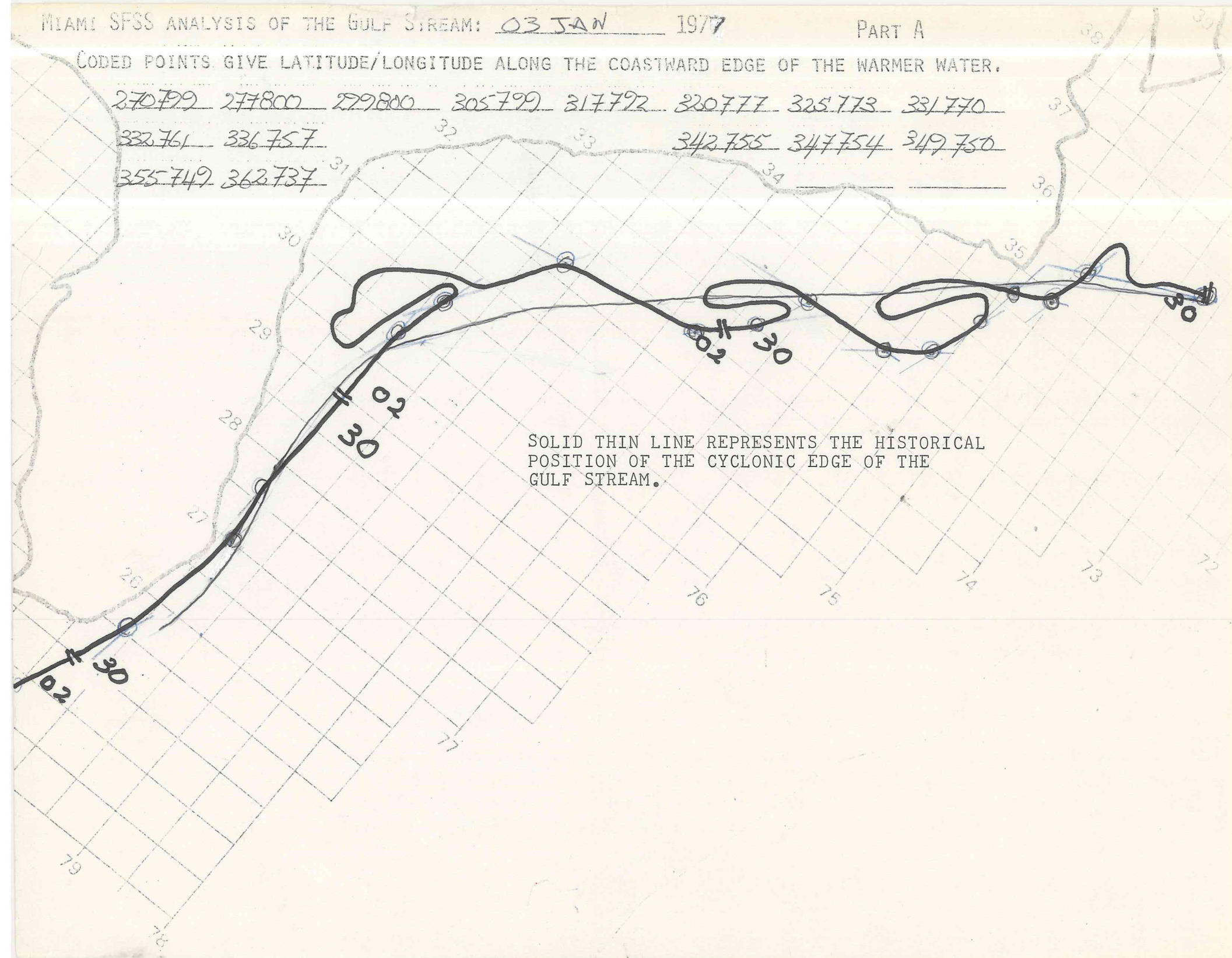
MIAMI SFSS ANALYSIS OF THE GULF STREAM: 03 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

270729 277800 279800 305799 317792 320777 325773 331770  
332761 336757 342755 347754 349750  
355749 362737

SOLID THIN LINE REPRESENTS THE HISTORICAL  
POSITION OF THE CYCLONIC EDGE OF THE  
GULF STREAM.





GULF STREAM ANALYSIS 03 JANUARY 1977.

THE STREAM IS WITHIN 2/10 DEGREE OF ITS HISTORICAL POSITION FROM 26°N TO 30°N. BETWEEN 30°N AND 31.5°N A DEEP MEANDER KEEPS THE STREAM WEST OF ITS MEAN POSITION BY ABOUT  $\frac{1}{2}$  DEGREE. BETWEEN 32°N AND 34.5°N A DOUBLE MEANDER SYSTEM MOVES THE MAIN FLOW EAST OF THE MEAN POSITION UP TO ONE DEGREE. NORTH OF 35°N THE STREAM IS IN THE MEAN POSITION. THERE HAS BEEN NO DATA NORTH OF 36°N FOR TWO WEEKS.

05 JANUARY 1977

LITTLE CHANGE IS SEEN FOR MAIN STREAM, HOWEVER A COLD EDDY ENTERED AT 24.9N 79.5W HAS APPARENT HISTORY TO JAN. 2, 1977 WITH A SHARP BULGE IN STREAM NEAR 82.5W AND EVENTUAL BREAKOFF. EDDY FOLLOWS STREAM AT SLOWER SPEED, ABT 1.5 KTS .

07 JANUARY 1977

SOUTH OF 28N, POSITION SHOWS LITTLE CHANGE. COLD EDDY NOTED EARLIER NOT FOUND AND PROBABLY WELL MIXED WITH GULF WATER. MEANDER CENTERED AT 29.6N 80.6W HAS GOOD DEFINITION. NORTH OF 31N, ANALYSIS IS FROM VISIBLE SECTIONS AND 24HR OLD DATA.

09 JANUARY 1977

SLIGHT BULGING NEAR 25°N REMAINS OF WAVE PROPAGATING DOWNSTREAM. FROM 26°N TO 28°N THE STREAM IS WEST OF THE HISTORICAL POSITION. FROM 29°N TO 32°N A SERIES OF MEANDERS HOLDS THE STREAM  $\frac{3}{4}$  DEGREE WEST OF THE HISTORICAL POSITION. FROM 32°N THROUGH 35°N THE STREAM IS SLIGHTLY EAST OF THE MEAN POSITION ALTHOUGH A LARGE INTRUSION OF COLD WATER NEAR 33°N MOVES THE EDGE NEARLY ONE DEGREE EASTWARD. NORTH OF 35°N THE STREAM IS NORTH (SHOREWARD) OF THE MEAN POSITION, TO 37.5°N.

12 JANUARY 1977

NEW WAVE DEVELOPMENT NR 32.5N 77W FROM DOWNSTREAM BULGE SEEN ON 09 JAN. SMALL WAVES NR 33.8N 76.5W AND 34.3N 75W ARE PROPAGATING TO THE NE.

14 JANUARY 1977

NO DATA FOR THIS DATE, OUTPUT OF PROG FRM 13 JAN ANALYSIS SMALL WAVES PROGED TO CONTINUE DOWNSTREAM, LARGE EDDY NR 33.2N 77.5W MAY BE ABOUT TO BREAK OFF.

17 JANUARY 1977.

STREAM NEAR THE NORMAL POSITION TO 29°N. FROM 29°N TO 32°N THE STREAM CONTINUES TO BE  $\frac{1}{2}$ °W OF THE MEAN POSITION. A LARGE MEANDER NEAR 33°N MOVES THE STREAM SEAWARD OF THE MEAN POSITION. NO DATA N OF 34°N.

19 JANUARY 1977

STREAM CONTINUES WEST OF THE MEAN POSITION THROUGHOUT THE LENGTH OF THE ANALYSED DATA.

21 JANUARY 1977

THE STREAM IS SLIGHTLY WEST OF THE MEAN POSITION TO 27.7°N, WHERE A SMALL ~~END~~ MEANDER MOVES THE STREAM SEAWARD.



MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 09 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223867 228868 236878 247880 250885 256887 257892 260892 264885 267873  
275865 274862 270860 264861 258857 256847 247846 245844 239849 236854  
231856 229855 231844 233837 236834  
241829 244822 244815 //

DETACHED MEANDERS  
ALONG OUTSIDE OF LOOP  
CENTERED AT  
250890/274882/277864/  
259850//  
WARM EDDY CENTERED  
AT 256840





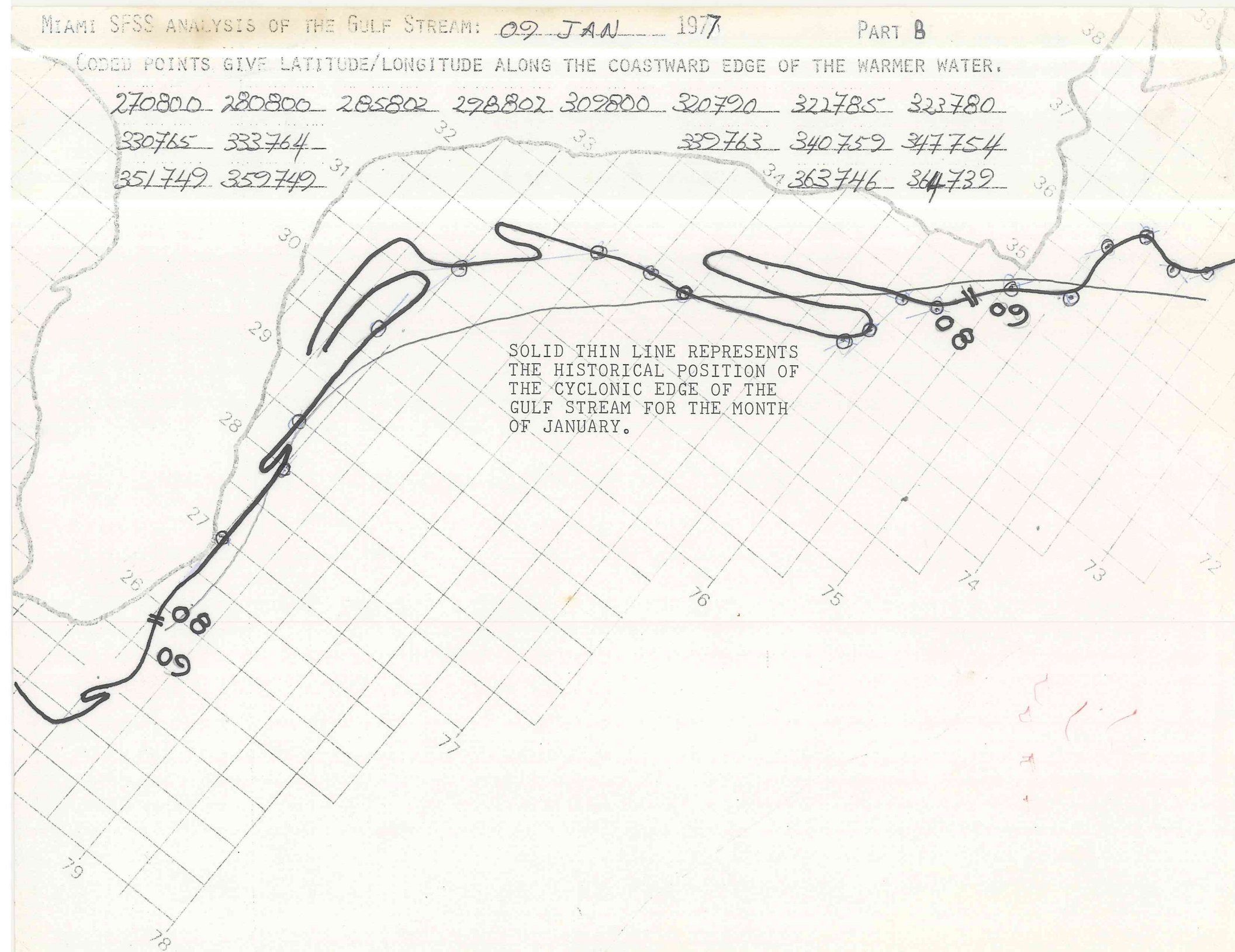
MIAMI SFSS ANALYSIS OF THE GULF STREAM: 09 JAN 1977

PART B

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

270800	280800	285802	298802	309800	320790	322785	323780
330765	333764			339763	340759	347754	
351749	359749			363746	364739		

SOLID THIN LINE REPRESENTS  
THE HISTORICAL POSITION OF  
THE CYCLONIC EDGE OF THE  
GULF STREAM FOR THE MONTH  
OF JANUARY.



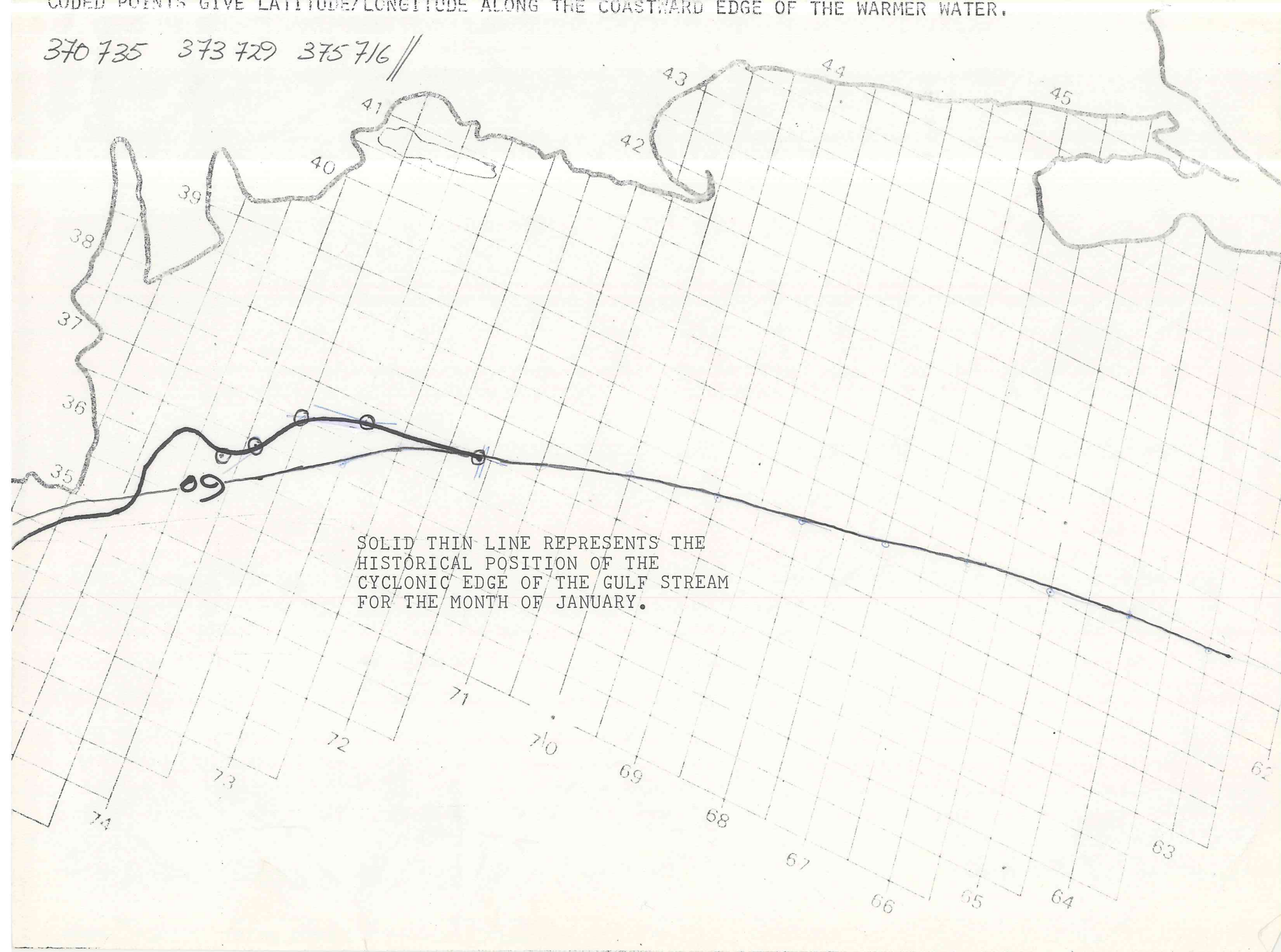


MIAMI SFSS ANALYSIS OF THE GULF STREAM: 09 JAN 1977

PART I

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

370 735 373 729 375 716 //





MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 12 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223 867 230 869 237 877 249 883 262 889 266 875 270 869 273 863 270 859 257 855  
252 848 247 844 240 843 235 845 231 840 235 830 240 825 241 820 //

DETACHED MEANDERS ALONG  
OUTSIDE OF LOOP CENTERED AT:

251 892 / 275 883 / 275 862 /  
257 845 //

COLD EDDY CENTERED  
AT 226 848 WITH DIAMETER  
OF 60 KM.





MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 14 JAN 1976

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

222 867 230 870 240 880 249 884 257 886 265 870 270 861 261 855 250 856 240 850  
233 847 231 840 234 830 240 820 //

Detached Meanders  
Along outside of Loop  
Current centered at

253 893 / 276 881 /

275 858 / 247 846 //





MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 17 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223867 228869 241881 254885 264886 265885 265881 264875 265868 274862  
275859 265854 256856 249856 246852 252846 253842 251840 247840 232845  
230837 233825 237822

238815 //

90°W

85°W

DETAILED MEANDERS  
ALONG OUTSIDE OF  
LOOP CENTERED AT

254891 / 277878 //

3-3½ kt

29

28

27

25

24

23



MIAMI SFSS ANALYSIS OF THE GULF STREAM: 17 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

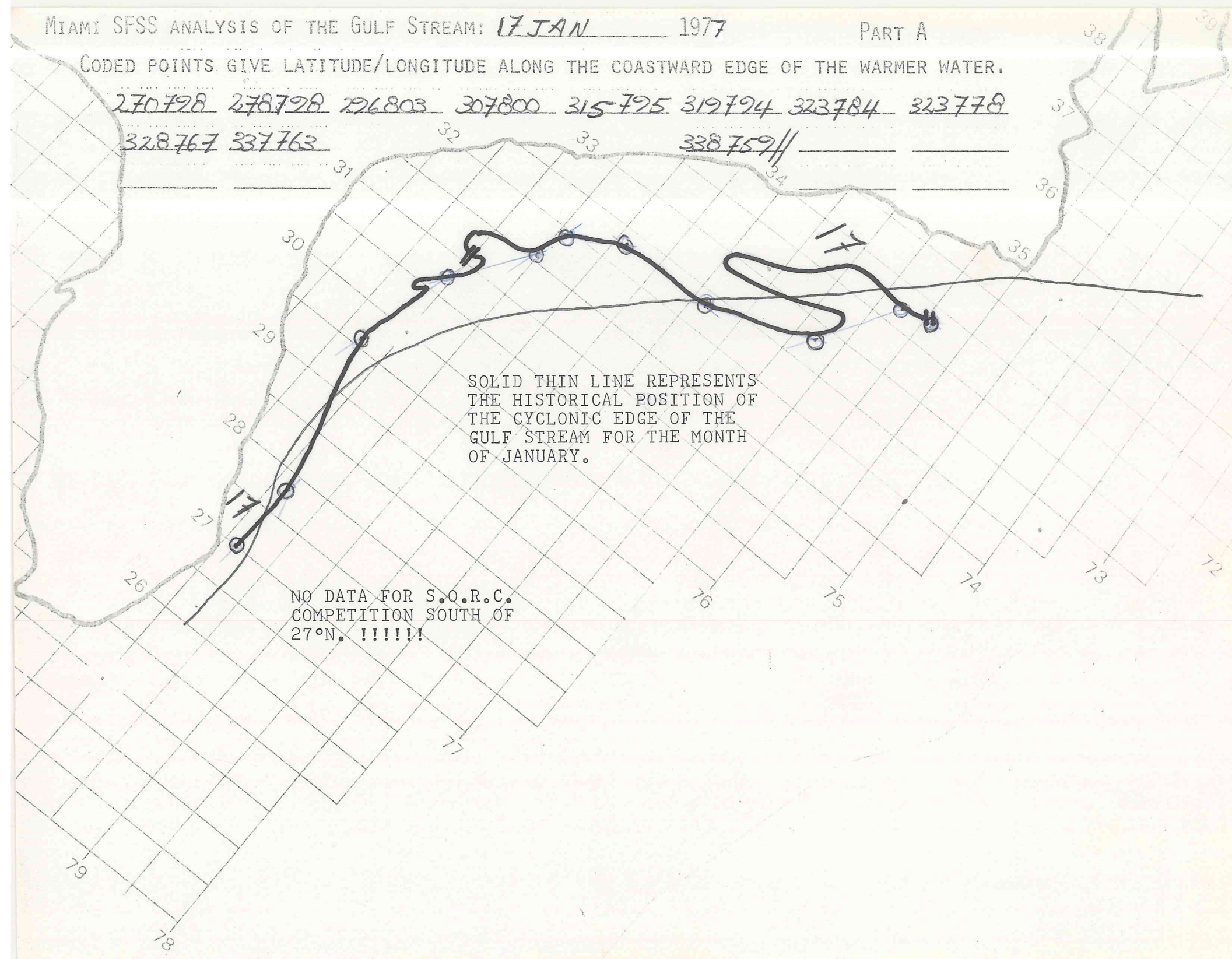
270728 278728 226803 307800 315725 319794 323784 323778

328767 337763

338759 //

SOLID THIN LINE REPRESENTS  
THE HISTORICAL POSITION OF  
THE CYCLONIC EDGE OF THE  
GULF STREAM FOR THE MONTH  
OF JANUARY.

NO DATA FOR S.O.R.C.  
COMPETITION SOUTH OF  
27°N. !!!!!!!





MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 19 JAN 197

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223866 230870 238880 252885 265885 267882 265874 265865 270864 275856  
270853 246855 244854 244850 250847 252843 249839 231846 230836 235822  
238820 238815 \_\_\_\_\_

center of meanders  
along outside of  
loop located at  
259891/ 276876

ANALYSIS BASED  
ON FORECAST  
MOVEMENT OF  
POSITION OF LOOP  
CURRENT.





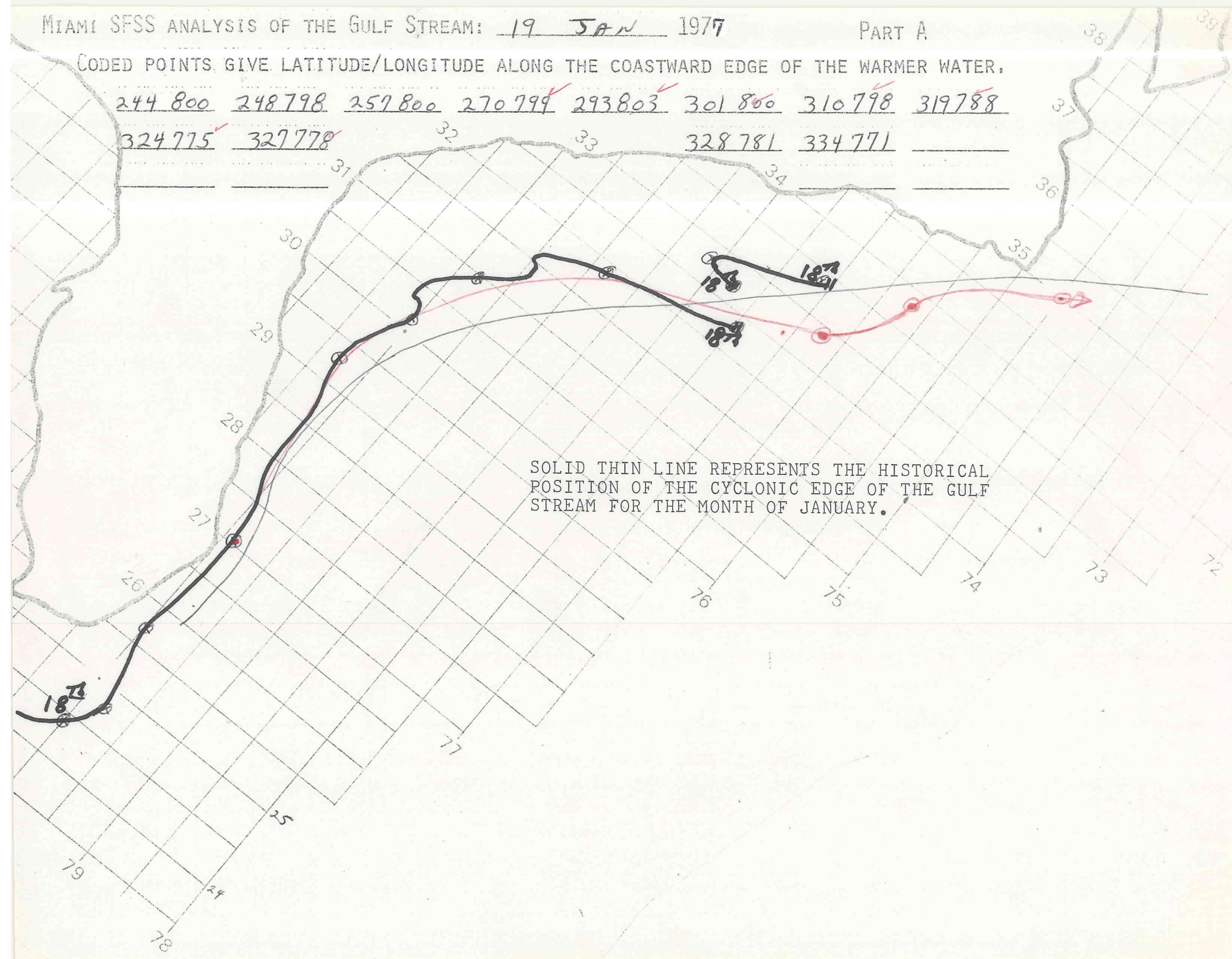
MIAMI SFSS ANALYSIS OF THE GULF STREAM: 19 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

<u>244 800</u>	<u>248 798</u>	<u>257 800</u>	<u>270 799</u>	<u>293 803</u>	<u>301 800</u>	<u>310 798</u>	<u>319 788</u>
<u>324 775</u>	<u>327 778</u>			<u>328 781</u>	<u>334 771</u>		

SOLID THIN LINE REPRESENTS THE HISTORICAL  
POSITION OF THE CYCLONIC EDGE OF THE GULF  
STREAM FOR THE MONTH OF JANUARY.



GULF OF MEXICO LOOP CURRENT ANALYSIS

19 JANUARY 1977

ANALYSIS BASED SOLELY ON FORECAST MOVEMENT FROM PREVIOUS DAY.

21 JANUARY 1977.

<sup>3</sup>/<sub>4</sub> OF THE LOOP IS VISIBLE TODAY AFTER NEARLY ONE WEEK OF CLOUDY SKIES. THE MAJOR MEANDERS HAVE PROPAGATED DOWNSTREAM QUITE RAPIDLY. A NEW MEANDER APPEARS TO BE FORMING NEAR 26N89W.

24 JANUARY 1977

THE MAJOR OBSERVATION IS THE LARGE WAVE WHICH ALMOST COMPLETELY BLOCKS THE STRAITS OF FLORIDA NEAR 83°W. THE RATE AT WHICH THESE WAVES ARE PROPAGATING AROUND THE LOOP SUGGESTS THAT THEY ARE NOT VERY DEEP, ONLY OF THE ORDER OF 10-20 METRES.

~~26~~-JANUARY--1977

WAVE MENTIONED IN 24 JAN ANALYSIS STILL REMAINS 82 TO 83 W WITH WEAKENING OF NW SECTION AND THERMAL GRADIENT DROPPING TO NEAR 90W. COLD EDDY CENTERED AT 24.6 N 85.4W MOVING SE WITH FLOW AT .5 KNTS.

28 JANUARY 1977

NO SIGNIFICANT CHANGES CAN BE SEEN IN THE SHAPE OR POSITION OF THE LOOP IN THE PAST TWO DAYS.

31 JANUARY 1977

A LARGE MEANDER HAS DEVELOPED NEAR 26°N 88.5°W. THE WAVE IN THE FLORIDA STRAITS HAS MOVED VERY SLOWLY DOWNSTREAM OVER THE PAST WEEK. OTHERWISE, NO SIGNIFICANT CHANGES.

02 FEBRUARY 1977

EXTSV CLOUD COVER PAST TWO DAYS HAS PREVENTED A CLEAR LOOK A LOOP. TODAY'S ANALYSIS IS A FORECAST OF FEATURE MOVEMENT.

04 FEBRUARY 1977

CONTINUING CLOUD COVER HAS PREVENTED ANY CURRENT ANALYSIS...EXCEPT IN THE STRAITS OF FLORIDA. TODAY'S ANALYSIS IS A FORECAST OF FEATURE MOVEMENT.

09 FEBRUARY 1977

WESTERN PORTION OF LOOP NOT SEEN W OF 87°W. FEATURES CONT TO MOVE DOWNSTREAM ALG E EDGE OF LOOP. WAVE WHICH WAS NEAR 26°N APPEARS TO HAVE DISAPPEARED. CANNOT FIND COLD EDDY WHICH SHOULD HAVE BEEN LEFT.

11 FEBRUARY 1977

LARGE WAVE NR 25.5°N 87°W NOT SEEN PREVIOUSLY...IF VERIFIED THIS SHOWS THAT LOOP IS CLOSING OFF. SUDDEN APPEARANCE OF THIS WAVE MAKES IT SOMEWHAT SUSPECT!!!!

14 FEBRUARY 1977

NO NEW DATA SINCE 11 FEB.

16 FEBRUARY 1977

POSITIONS SEEN THRU A FEW BREAKS IN CLOUDS GENERALLY CONFIRM POSITIONS OF 11 FEBRUARY 1977

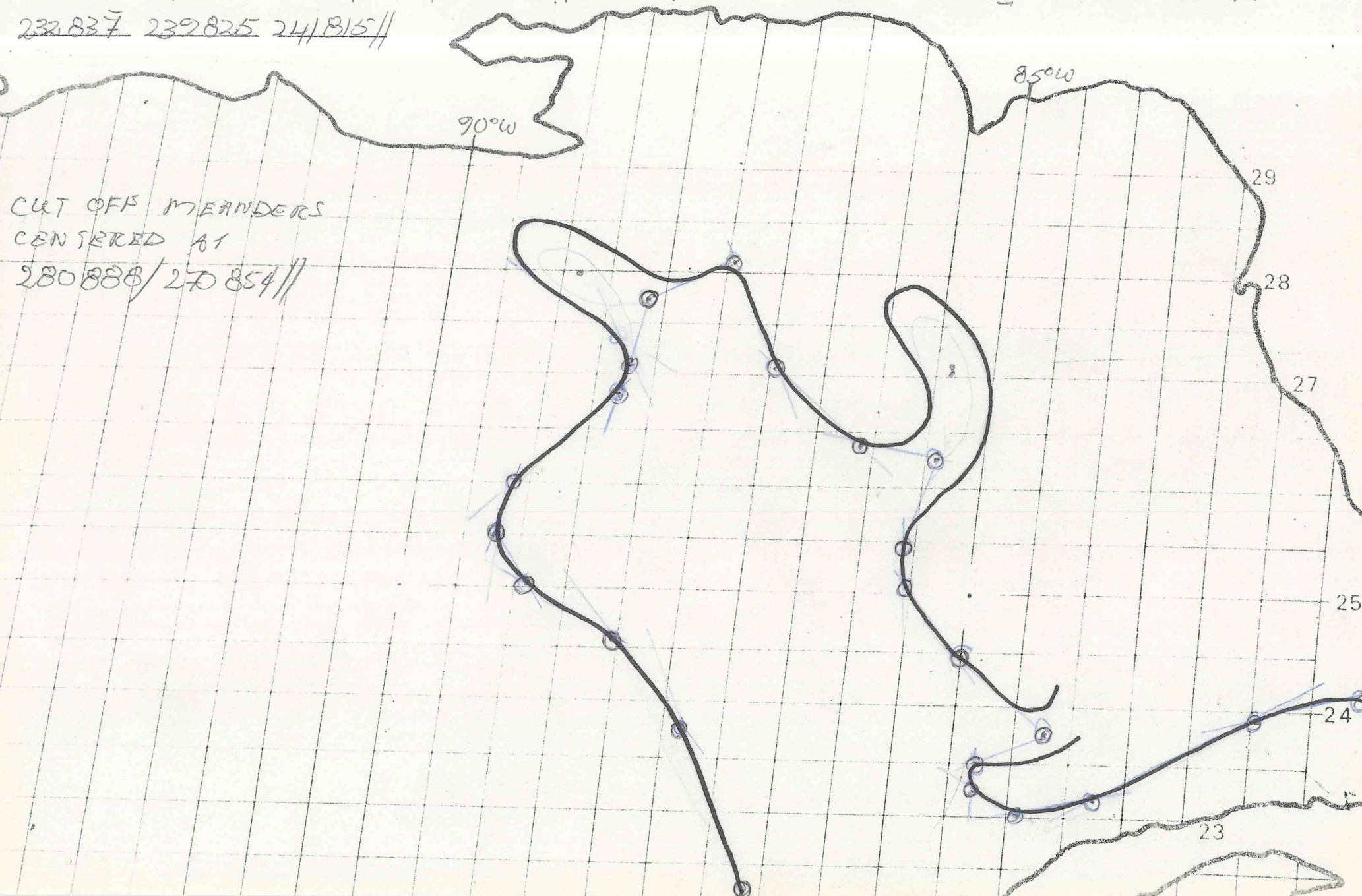


MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 21 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223866 238874 246881 250889 255892 260891 268883 271882 278882 281875  
271869 264861 263854 254856 250855 245850 238843 235848 232848 230844  
232837 239825 241815 //

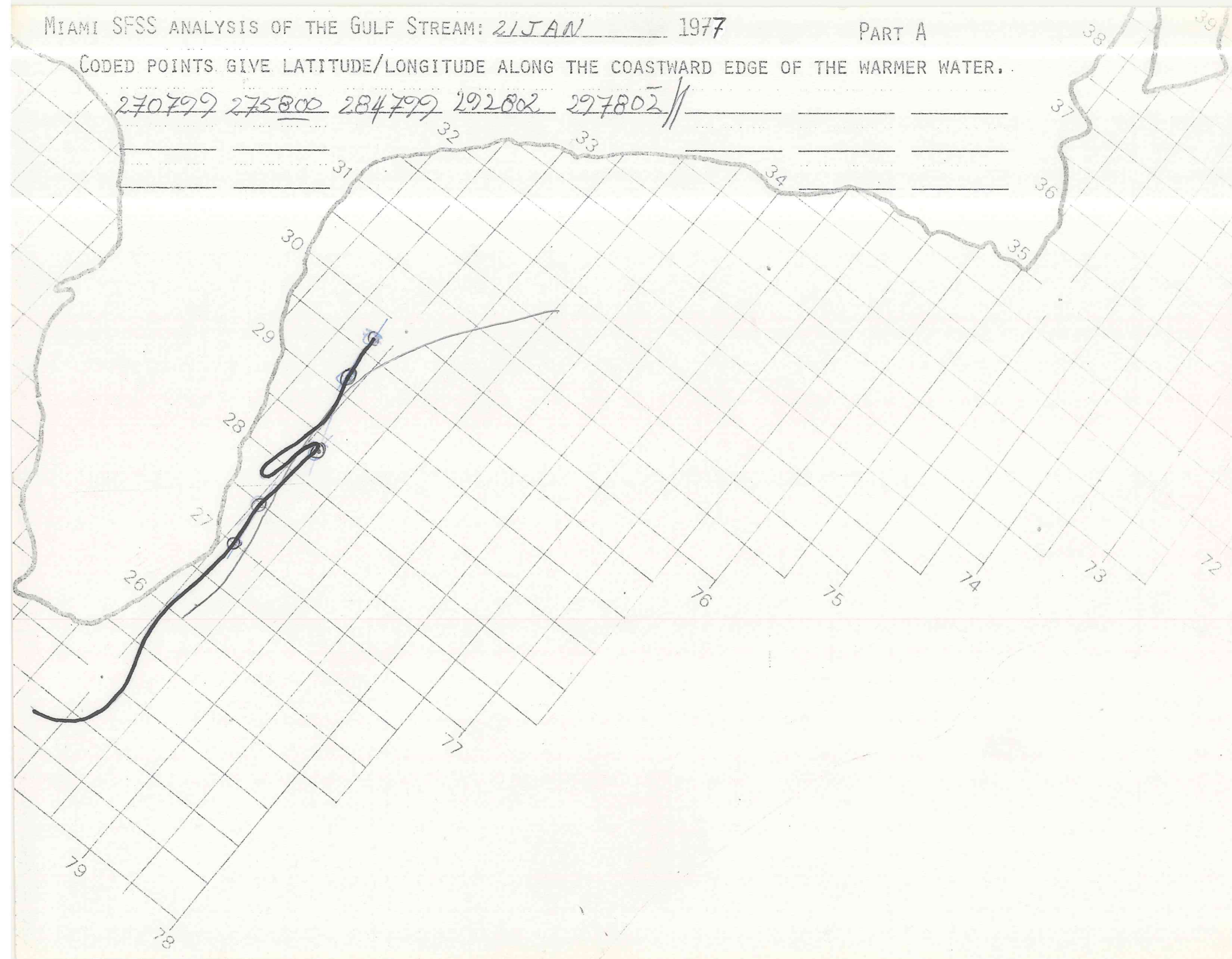


MIAMI SFSS ANALYSIS OF THE GULF STREAM: 21 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

270799 275800 284799 292802 297802 //





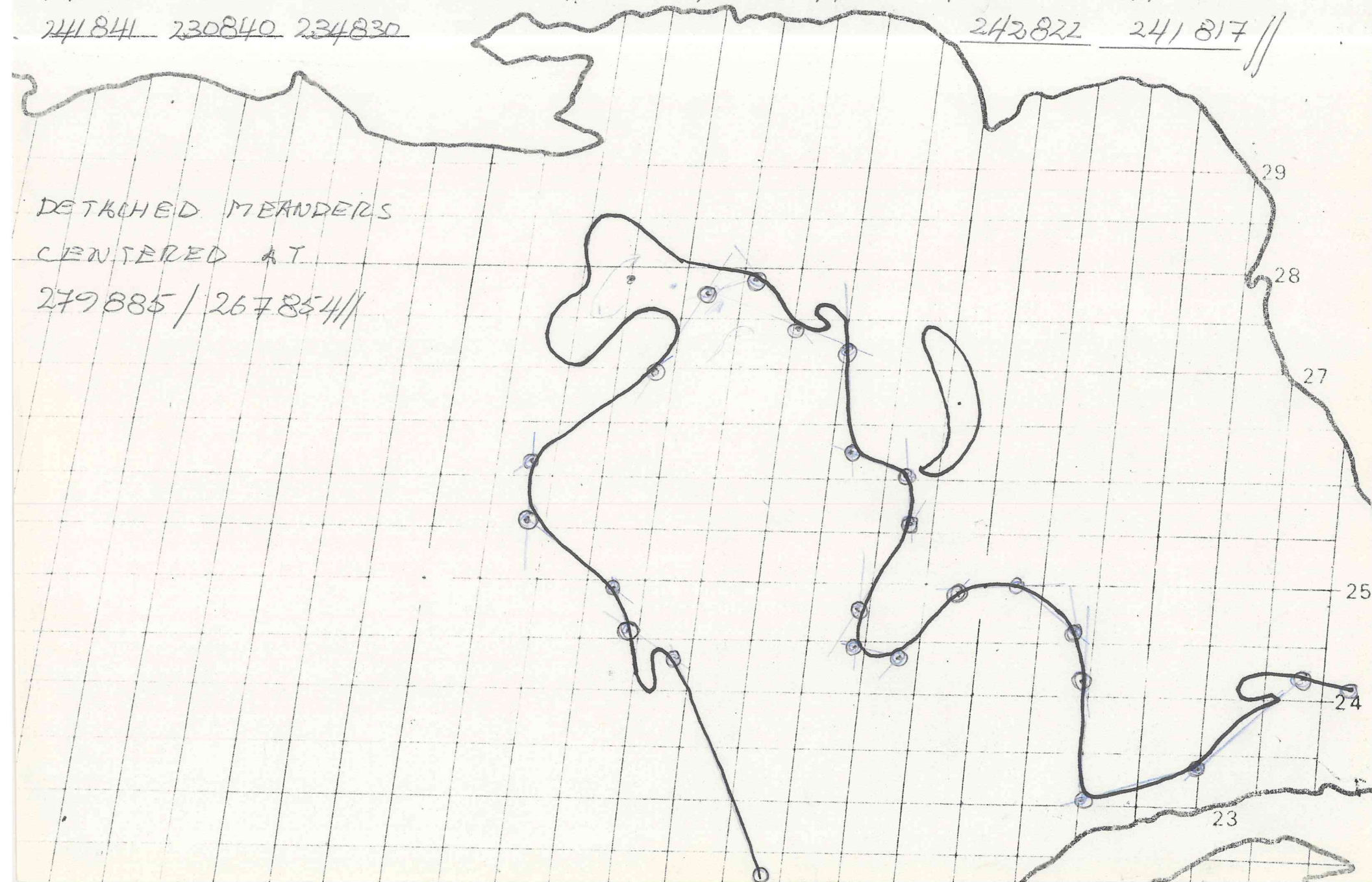
MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 24 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

222867 244877 246881 249883 256892 262892 270882 278878 279874 274870  
272865 262863 260858 256857 248861 245861 244857 249852 250847 246842  
241841 230840 234830 242822 241817 //

DETACHED MEANDERS  
CENTERED AT  
279885 / 267854 //



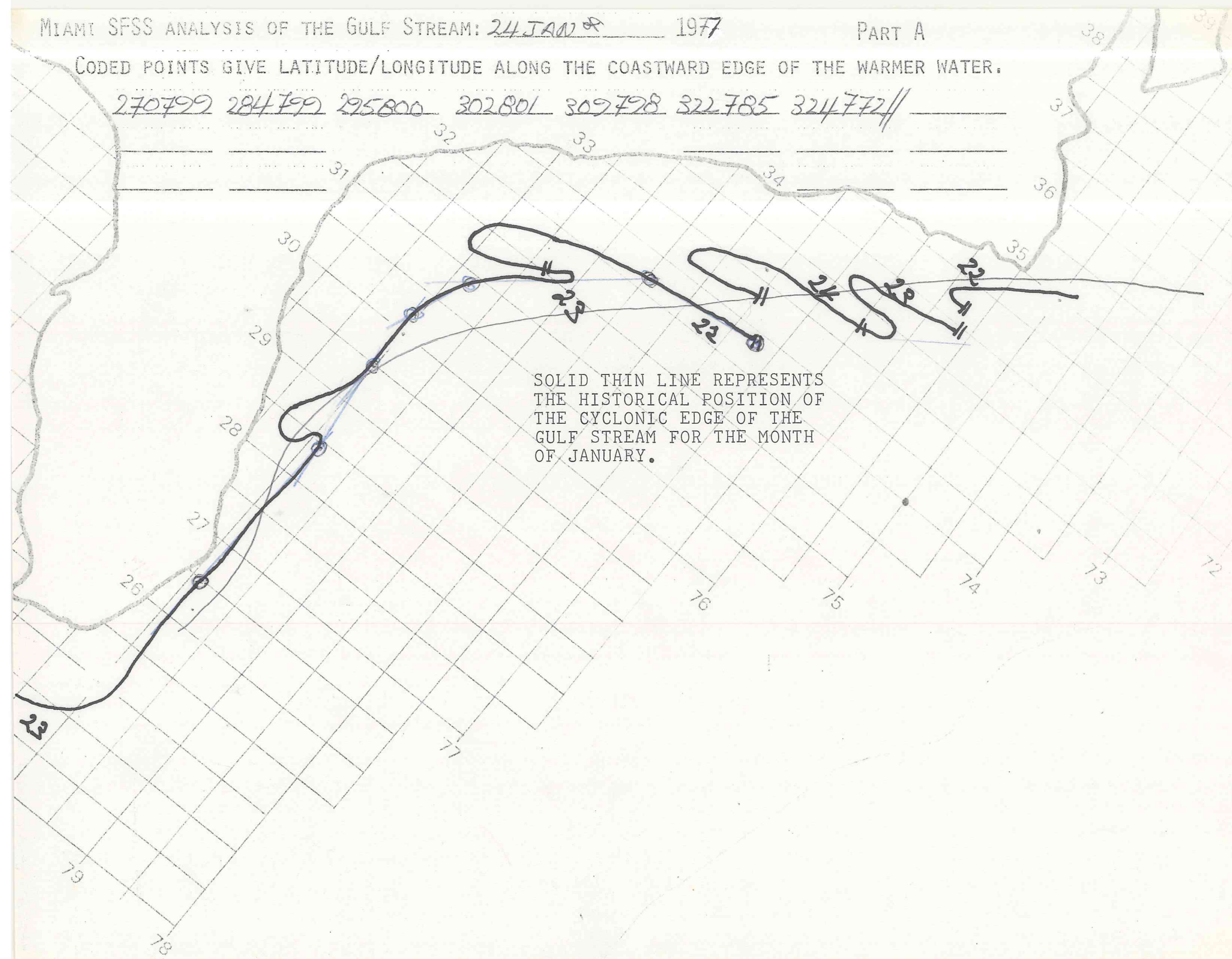
MIAMI SFSS ANALYSIS OF THE GULF STREAM: 24 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

270799 284799 295800 302801 309798 322785 324772//

SOLID THIN LINE REPRESENTS  
THE HISTORICAL POSITION OF  
THE CYCLONIC EDGE OF THE  
GULF STREAM FOR THE MONTH  
OF JANUARY.





## GULF STREAM ANALYSIS

24 JANUARY 1977

THE STREAM IS NEAR THE MEAN POSITION TO  $29.5^{\circ}\text{N}$  AFTER WHICH IT IS NEARLY 30 MI WEST, TO  $32^{\circ}\text{N}$ . NORTH OF  $32^{\circ}\text{N}$  A SERIES OF MEANDERS ARE SEEN, HOWEVER CLOUD COVER PREVENTS OBSERVING JUST HOW FAR OFFSHORE THEY MOVE THE STREAM.

26 JANUARY 1977

MUCH THE SAME AS 24 JAN WRITE UP WITH THREE SMALL EDDIES PROPOGATING DOWNSTREAM BETWEEN 28 TO 30 N.

28 JANUARY 1977

THE STREAM CONTINUES ABOUT 30 MI WEST OF THE MEAN POSITION TO  $32^{\circ}\text{N}$  AFTER WHICH A SERIES OF SMALL MEANDERS MOVE THE EDGE EASTWARD UP TO 30 MI TO  $36^{\circ}\text{N}$ . NORTH OF  $36.5^{\circ}\text{N}$  A LARGE MEANDER APPEARS TO HAVE FORMED.

31 JANUARY 1977

THE STREAM CONTINUES ABOUT 30 MI WEST OF THE MEAN POSITION FROM  $29^{\circ}\text{N}$  TO  $32^{\circ}\text{N}$  NORTH OF WHICH A SERIES OF SMALL MEANDERS MOVE THE THERMAL BOUNDARY EAST OF THE MEAN POSITION BY ABOUT 15 MI.

02 FEBRUARY 1977

~~EXTENSIVE CLOUD COVER PREVENTS ANY ANALYSIS LATER THEN 31 JAN 77~~  
THE STREAM CONTINUES ABOUT 15 MI WEST OF THE MEAN FEBRUARY POSITION FROM  $29^{\circ}\text{N}$  TO ABOUT  $31.5^{\circ}\text{N}$ . NORTH OF  $32^{\circ}\text{N}$  THE STREAM IS ABOUT 10 MI EAST OF THE MEAN POSITION.

04 FEBRUARY 1977

CLOUD COVER PREVENTS ANY ANALYSIS THIS DATE.

07 FEBRUARY 1977

STREAM IS SLIGHTLY EAST OF THE MEAN POSITION ALONG FLA COAST TO  $29^{\circ}\text{N}$ . BETWEEN  $29^{\circ}\text{N}$  AND  $32^{\circ}\text{N}$  STREAM IS SLIGHTLY WEST OF MEAN POSITION.

A DEVELOPING MEANDER BETWEEN  $32^{\circ}\text{N}$  AND  $33^{\circ}\text{N}$  MOVES THE STREAM WELL TO THE EAST OF THE MEAN POSITION. BETWEEN 71 AND 73W THE STREAM BULGES SHOREWARD NEARLY ONE DEGREE FROM THE MEAN POSITION.

09 FEBRUARY

MEANDER NEAR  $32.5^{\circ}\text{N}$  HAS MOVED DOWNSTREAM ABOUT 0.4 KT PAST TWO DAYS. LARGE MEANDER NEAR  $71.5^{\circ}\text{W}$  IS WELL SEEN. STREAM SEEN E OF  $71^{\circ}\text{W}$  FOR FIRST TIME INM NEARLY A MONTH!!!

14 FEBRUARY 1977

ONLY CURRENT DATA E OF  $75^{\circ}\text{W}$ . STREAM IS GENLY E OF MEAN POSITION TO  $73.5^{\circ}\text{W}$ , NORTH OF THE MEAN POSITION BTN  $73^{\circ}\text{W}$  AND  $70.5^{\circ}\text{W}$ , SOUTH OF THE MEAN POSITION BTN  $70^{\circ}\text{W}$  AND  $66^{\circ}\text{W}$ , AND SLIGHTLY SOUTH OF THE MEAN EAST OF  $65^{\circ}\text{W}$ .

16 FEBRUARY 1977

DATA FROM FEB 15/16 SHOWS THE STREAM IS EAST OF THE MEAN POSITION FROM  $32^{\circ}\text{N}$  THRU  $36^{\circ}\text{N}$ . A LARGE WAVE MOVES THE STREAM NORTH AT  $70^{\circ}\text{W}$  AND SOUTH AT  $69^{\circ}\text{W}$ . NO DATA SOUTH OF  $29^{\circ}\text{N}$ .



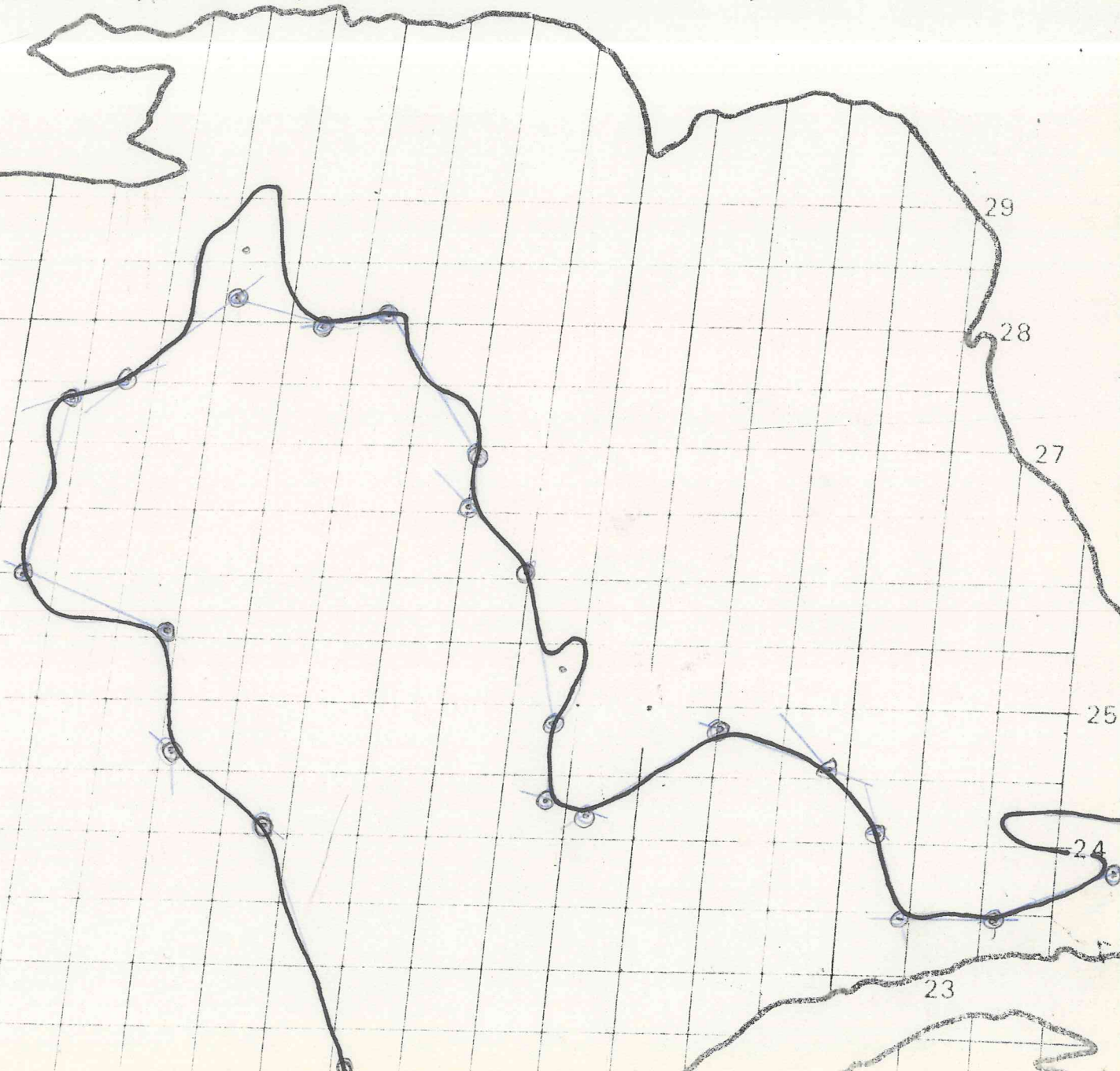
MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 28 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

222869 244877 247884 255886 260897 274896 275892 282884 280878 281873  
269865 265865 260860 249857 243857 242854 248845 246836 241833 235831  
235824 238815 //

DETACHED MEANDERS  
ON OUTSIDE EDGE OF  
LOOP CENTERED AT  
286884/253856 //





MIAMI SFSS ANALYSIS OF THE GULF STREAM: 28 JAN 1977

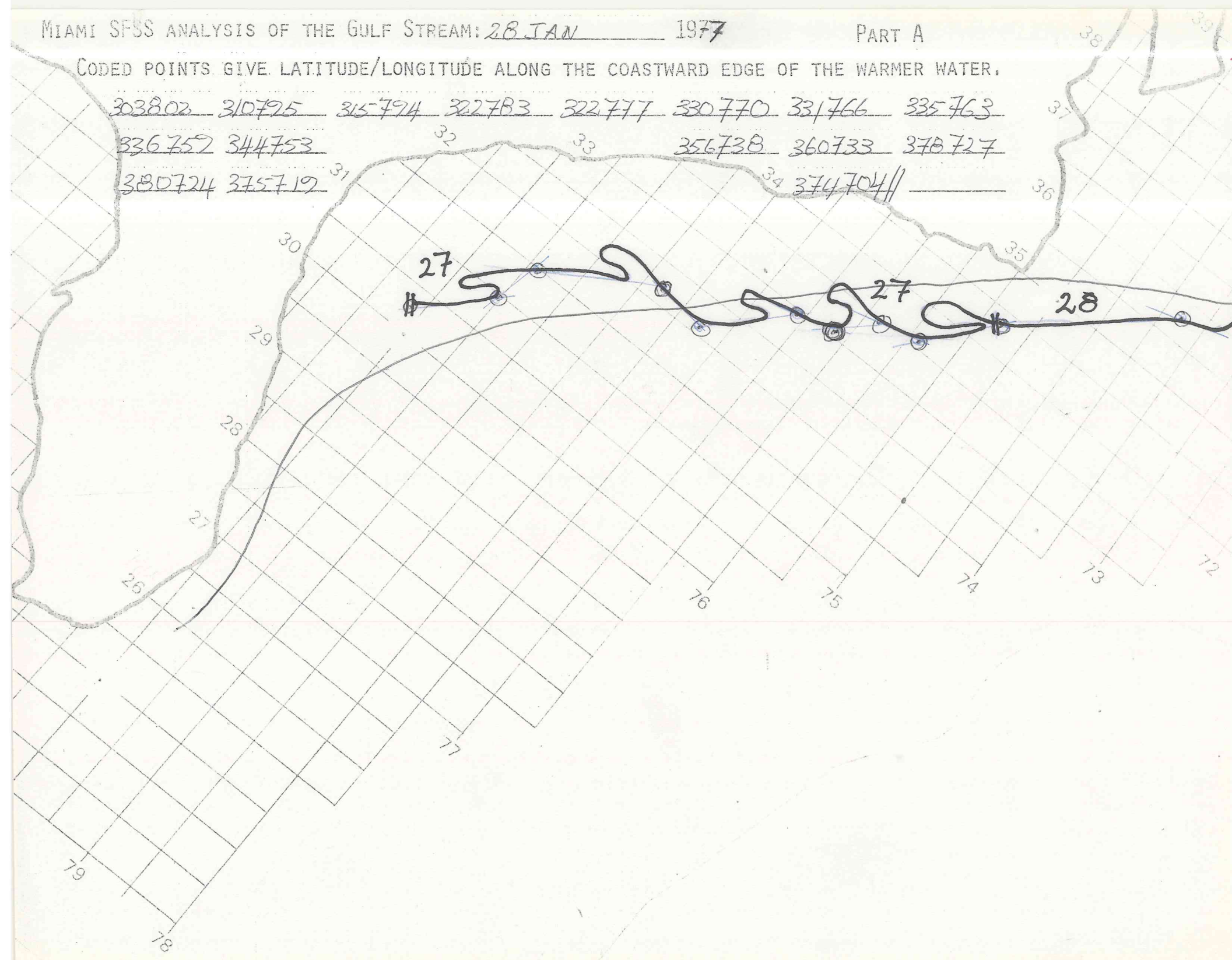
PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

303802 310725 315794 322783 322777 330770 331766 335763

336752 344753 356738 360733 378727

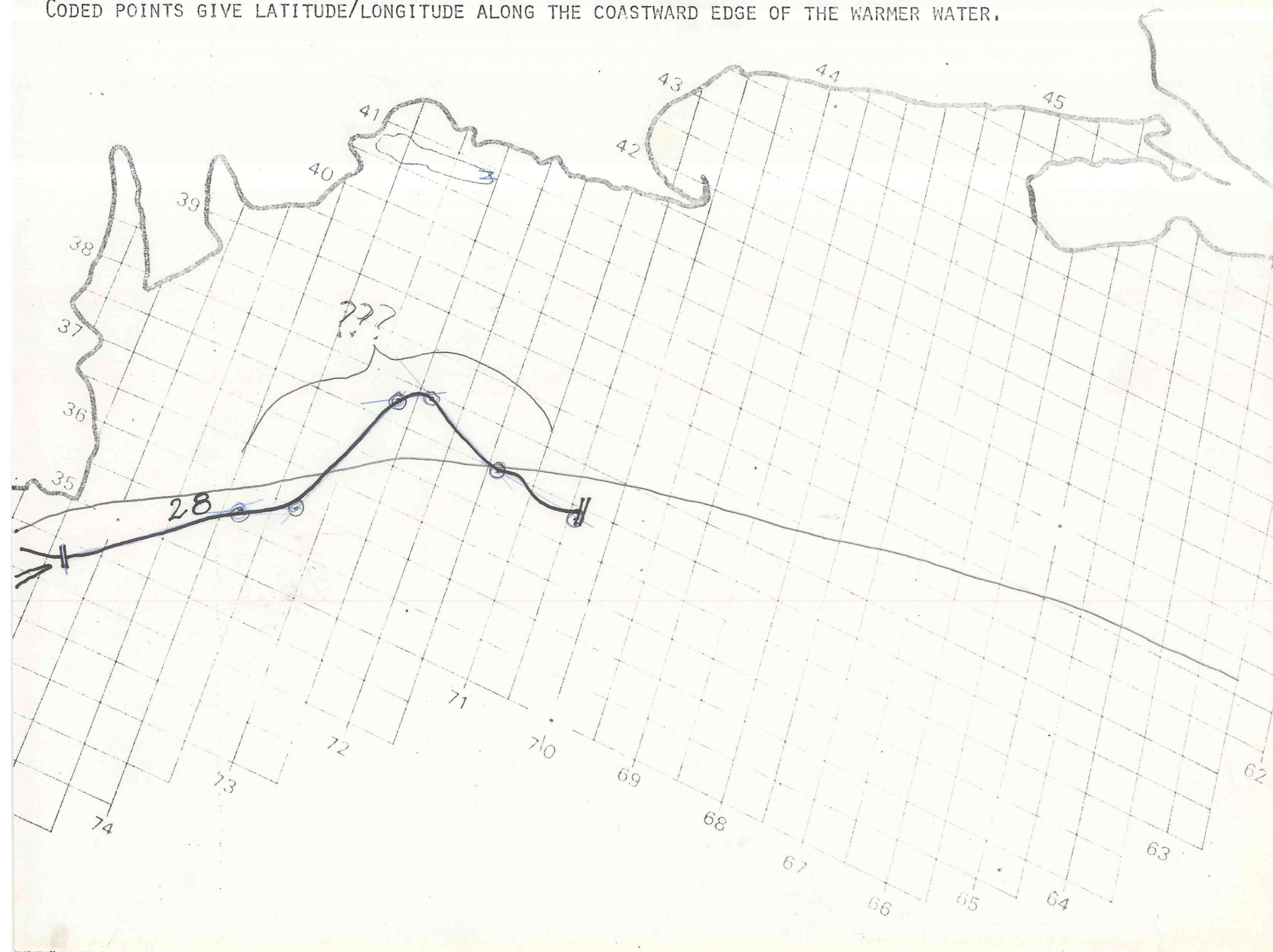
380724 375719 374704 //



MIAMI SFSS ANALYSIS OF THE GULF STREAM: 28 JAN 1977

PART B

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.





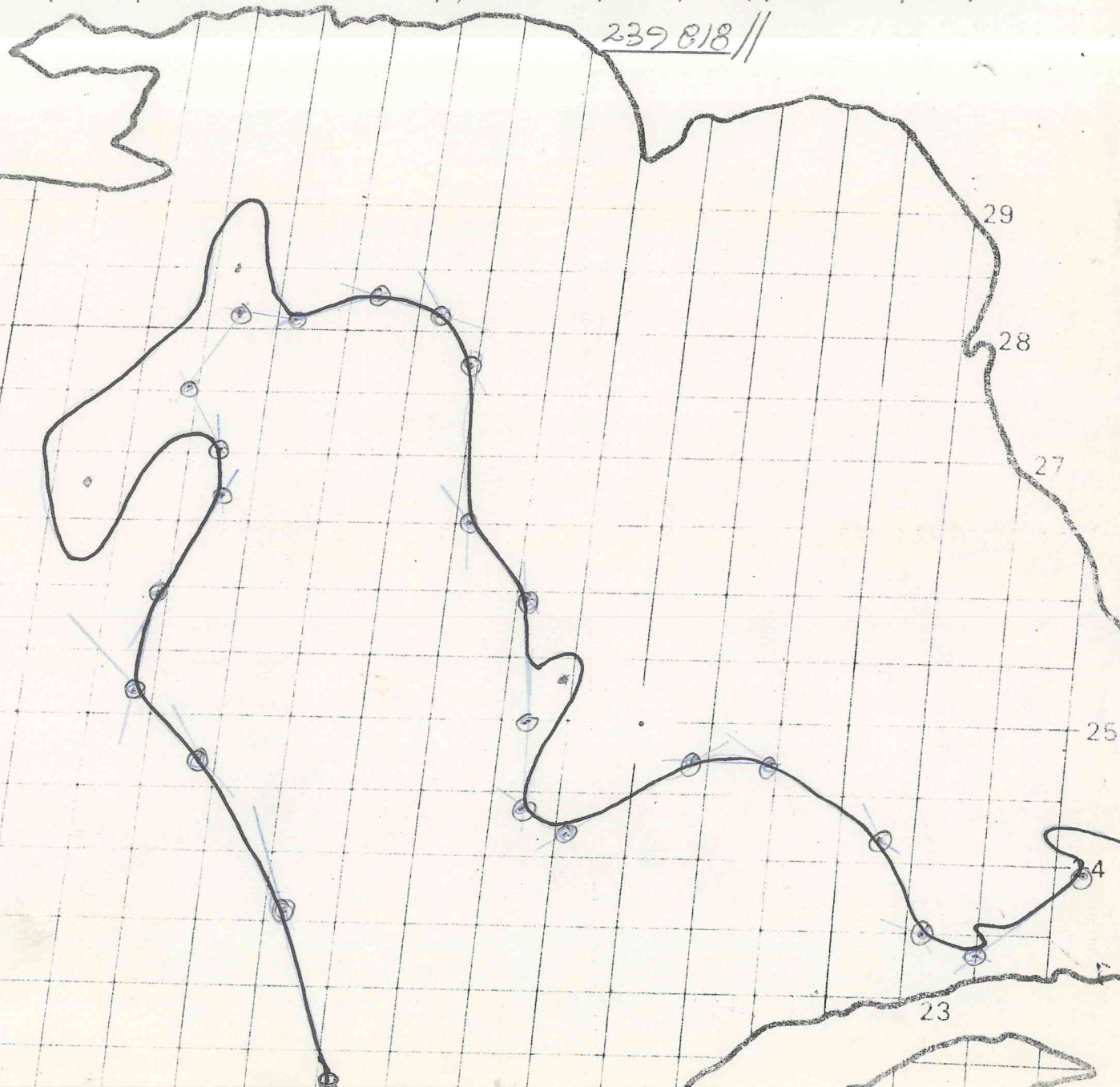
MIAMI SFSS ANALYSIS OF THE GULF OF MEXICO LOOP CURRENT: 31 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

223869 236874 247881 252887 260885 267882 270883 275885 280883 281879  
283873 281868 277865 265864 259859 250858 244857 242854 247846 247840  
24283 235829 234825 239818 //

DETACHED MEANDERS  
ALONG OUTSIDE EDGE  
OF LOOP CENTERED  
AT 268893/285883/  
254856 //



MIAMI SFSS ANALYSIS OF THE GULF STREAM: 31 JAN 1977

PART A

CODED POINTS GIVE LATITUDE/LONGITUDE ALONG THE COASTWARD EDGE OF THE WARMER WATER.

286802 287801 292801 307800 314796 324782 325776 331771

333766 336760 //

