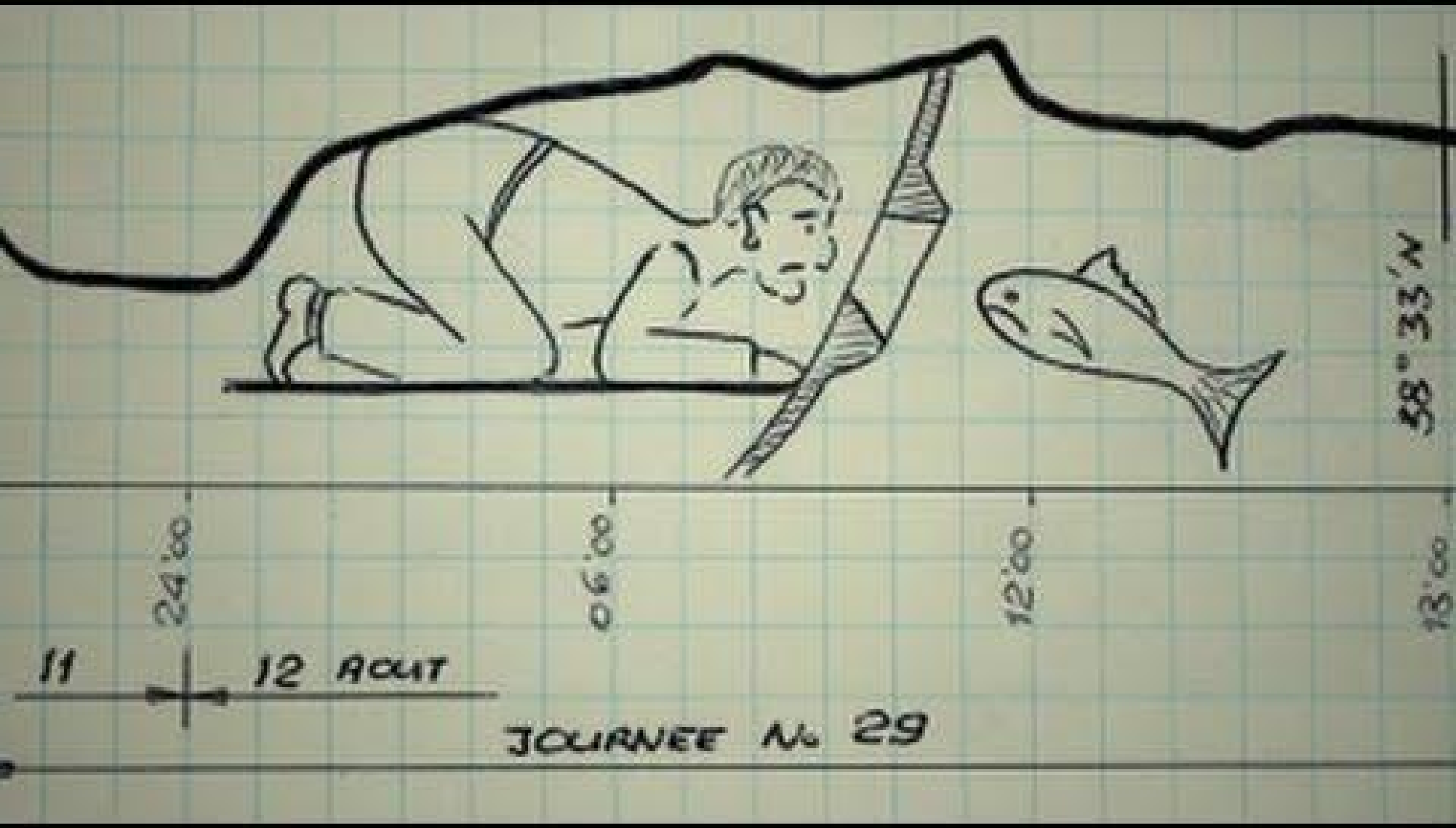
48° 33' N
24'00
00'00
12'00
11 — 12 AOUT
JOURNEE N° 29

1
00:00:00,010 --> 00:00:04,170
In the summer of 1969 NASA made

2
00:00:04,190 --> 00:00:08,350
history. Well, yes, up here, of course,

3
00:00:08,370 --> 00:00:12,520
but way, way down here too.

4
00:00:16,620 --> 00:00:20,770
Down 2,000 feet under the surface of the ocean. Starting off the coast of

5
00:00:20,790 --> 00:00:24,930
Florida, six aquanauts drift along inside the Gulf Stream

6
00:00:24,950 --> 00:00:29,090
for thirty days.

7
00:00:33,240 --> 00:00:37,360
This is the Ben Franklin, a fifty-foot submersible

8
00:00:37,380 --> 00:00:41,490
designed by Swiss explorer Jacques Piccard and his team of engineers.

9
00:00:41,510 --> 00:00:45,580
The mission of the Ben Franklin is to explore the Gulf

10
00:00:45,600 --> 00:00:49,640
Stream, not by powering its way through it like a military submarine might

11
00:00:49,660 --> 00:00:53,670
do, but to enter it and become a part of it.

12
00:00:53,690 --> 00:00:57,690
The Ben Franklin will drift passively within the core of this massive current,

13
00:00:57,710 --> 00:01:01,870

observing and gathering scientific data along the way.

14
00:01:06,070 --> 00:01:10,210
The crew will collect continuous observations on

15
00:01:10,230 --> 00:01:14,390
drift speed, water depth, water temperature, salinity,

16
00:01:14,410 --> 00:01:18,560
marine life in the stream and conduct 3D photomapping of

17
00:01:18,580 --> 00:01:22,730
the Continental Shelf. As the

18
00:01:22,750 --> 00:01:26,900
days extend into weeks, the crew of the Ben Franklin makes exciting

19
00:01:26,920 --> 00:01:31,040
scientific discoveries and observes amazing sea life

20
00:01:35,200 --> 00:01:39,310
while at the same time having to endure sudden surges in the current,

21
00:01:39,330 --> 00:01:43,410
abrupt changes in the sea floor, and malfunctioning support

22
00:01:43,430 --> 00:01:47,490
systems that begin to make life inside the sub very

23
00:01:47,510 --> 00:01:51,550
uncomfortable. On August 14, 1969,

24
00:01:51,570 --> 00:01:55,600
after 1,400 miles and 31 days spent drifting within the Gulf

25
00:01:55,620 --> 00:01:59,620
Stream, the Ben Franklin splashes up some 300 miles

26
00:01:59,640 --> 00:02:03,790
off Nova Scotia, Canada.

27
00:02:07,980 --> 00:02:12,130
The Ben Franklin and the Apollo 11 missions were perhaps the greatest

28
00:02:12,150 --> 00:02:16,310
expeditions of their kind and ended a decade of incredible technological

29
00:02:16,330 --> 00:02:20,490
achievements. The findings from the Ben Franklin mission

30
00:02:20,510 --> 00:02:24,670
provided a wealth of information that is still being used to this day and helps

31
00:02:24,690 --> 00:02:28,830
provide a better understanding of the Gulf Stream and its role in weather and climate.

32
00:02:28,850 --> 00:02:32,990
This influence becomes abundantly clear each year

33
00:02:33,010 --> 00:02:37,130
as hurricanes tear through the Atlantic coastal region. The warm water

34
00:02:37,150 --> 00:02:41,270
of the Gulf Stream often increases the intensity of hurricanes.

35
00:02:41,290 --> 00:02:45,400
That's when the impact of ocean currents can very literally hit home.

36
00:02:45,420 --> 00:02:49,600
NASA studies the ocean from a very different perspective, using

37
00:02:49,620 --> 00:02:53,660
satellites in space that can make measurements of many key ocean factors,

38
00:02:53,680 --> 00:02:57,720

such as ocean color, temperature, salinity, and many more that

39
00:02:57,740 --> 00:03:01,750
influence the ocean, such as winds and sea ice. Ocean currents

40
00:03:01,770 --> 00:03:05,940
are also closely linked with our atmosphere. The exchange of heat

41
00:03:05,960 --> 00:03:10,110
between the ocean and the atmosphere drives the atmospheric circulation

42
00:03:10,130 --> 00:03:14,280
over the entire globe. Ocean currents on the surface and the deep ocean circulation

43
00:03:14,300 --> 00:03:18,470
also redistribute heat absorbed by the ocean and allows the ocean

44
00:03:18,490 --> 00:03:22,650
to act as our planet's thermostat, helping regulate the temperature of Earth.

45
00:03:22,670 --> 00:03:26,820
The ocean and atmosphere are just two components of complex

46
00:03:26,840 --> 00:03:31,000
global system of give-and-take that impacts Earth's overall climate.

47
00:03:31,020 --> 00:03:35,160
From the work done over 40 years ago by the Ben Franklin mission,

48
00:03:35,180 --> 00:03:39,330
to the work done today by its satellites, NASA's study of Earth's