



courtesy Katey Walter Anthony

1  
00:00:00,000 --> 00:00:03,990

[music]

2  
00:00:04,010 --> 00:00:08,050

Carbon, trapped in frozen earth for tens of thousands of years

3  
00:00:12,140 --> 00:00:16,120

is seeping out of thawing permafrostthat lies beneath Arctic lakesis seeping out of thawing permafrostthat lies b

4  
00:00:24,200 --> 00:00:28,190

It bubbles up as methane, a greenhouse gas much more potent than CO2.

5  
00:00:32,250 --> 00:00:36,240

In the fall, when lakes freeze and bubbles build up in pockets under the ice,

6  
00:00:40,270 --> 00:00:44,260

University of Alaska Fairbanks scientists measure these seeps, one lake at a time.

7  
00:00:48,280 --> 00:00:52,260

And occasionally demonstrate methane's flammability ...

8  
00:00:52,280 --> 00:00:56,270

Scientists: Whoa!

9  
00:00:56,290 --> 00:01:00,270

But there are many, many lakes.And in the wilds of Alaska,they can only visit so many on foot.

10  
00:01:08,320 --> 00:01:12,350

NASA's ABoVE campaign combines their precise measurements from individual lakes

11  
00:01:12,370 --> 00:01:16,400

with data from satellites which can observe the whole Arctic,