



Outcrop



Core

1
00:00:03,510 --> 00:00:01,990
hi everyone my name is michaela and i'm

2
00:00:04,309 --> 00:00:03,520
a phd student from the university of

3
00:00:05,430 --> 00:00:04,319
auckland

4
00:00:06,710 --> 00:00:05,440
i'm just going to talk to you about some

5
00:00:07,349 --> 00:00:06,720
of the work i've been doing which

6
00:00:09,910 --> 00:00:07,359
includes

7
00:00:10,790 --> 00:00:09,920
3d imaging earth's oldest evidence of

8
00:00:14,150 --> 00:00:10,800
life

9
00:00:16,390 --> 00:00:14,160
formation which is found in north

10
00:00:17,430 --> 00:00:16,400
western australia and is 3.48 billion

11
00:00:19,670 --> 00:00:17,440
years old

12
00:00:20,950 --> 00:00:19,680
it is biosedimentary structures called

13
00:00:22,790 --> 00:00:20,960

stromatolites

14

00:00:24,390 --> 00:00:22,800

and unfortunately a lot of the outcrop

15

00:00:25,830 --> 00:00:24,400

deposits are highly weathered

16

00:00:28,550 --> 00:00:25,840

and this has caused a lot of debate in

17

00:00:30,470 --> 00:00:28,560

the literature over their biogenicity

18

00:00:32,549 --> 00:00:30,480

so we undertook a drilling campaign and

19

00:00:35,030 --> 00:00:32,559

obtained fresh drill core which shows

20

00:00:37,110 --> 00:00:35,040

amazing preservation of these deposits

21

00:00:38,150 --> 00:00:37,120

and we actually image some specific

22

00:00:41,030 --> 00:00:38,160

horizons

23

00:00:42,150 --> 00:00:41,040

using the dingo in amsterdam and so this

24

00:00:43,830 --> 00:00:42,160

3d

25

00:00:45,590 --> 00:00:43,840

scan you can actually see that this

26

00:00:46,790 --> 00:00:45,600

shows that the stromatolite says 3d and

27

00:00:48,709 --> 00:00:46,800

morphology

28

00:00:50,709 --> 00:00:48,719

so this is helping us with proving the

29

00:00:53,029 --> 00:00:50,719

biogenicity of these deposits

30

00:00:53,750 --> 00:00:53,039

and so i'm currently rendering a 3d