1
00:00:00,000 --> 00:00:04,000
(Music)

2
00:00:04,000 --> 00:00:09,000
Hello, I am Justin Maki and I am the engineering camera lead for the Mars Science Laboratory mission

3
00:00:09,000 --> 00:00:14,000
and a member of the MSL science camera team and this is your Curiosity rover report.

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00:00:14,000 --> 00:00:17,000
The rover has been investigating the Yellowknife bay area

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00:00:17,000 --> 00:00:23,000
as part of an effort to pick the exact location of our first drill activity on Mars.

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The images being returned by Curiosity show a diverse collection of

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00:00:27,000 --> 00:00:33,000
interesting features, including sedimentary rocks, pebbles, cracks, nodules, and veins.

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00:00:33,000 --> 00:00:37,000
The vein features are seen as a bright white material,

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00:00:37,000 --> 00:00:41,000
and we see them just about everywhere we look in Yellowknife bay.

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The ChemCam instrument has found that these veins contain elevated levels of calcium sulfate,

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likely in the form of bassanite or gypsum.

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00:00:49,000 --> 00:00:52,000
Gypsum veins are also seen here on Earth and

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00:00:52,000 --> 00:00:54,000

associated with water percolating through

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00:00:54,000 --> 00:00:56,000
cracks and fractured rocks.

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00:00:56,000 --> 00:00:59,000
The exciting news from all of this analysis is a candidate site

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00:00:59,000 --> 00:01:03,000
where Curiosity will conduct its first drilling activity.

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00:01:03,000 --> 00:01:07,000
This site is located only a few meters away from the rover's current location

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00:01:07,000 --> 00:01:09,000
and lies in a flat area, suitable for drilling.

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The team hopes to drill directly into one of the veins

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00:01:12,000 --> 00:01:16,000
and place the powder into the SAM and ChemMin analytical instruments.

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00:01:16,000 --> 00:01:20,000
These instruments will give us detailed information about the composition of the material.

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We'll be driving over there in the next few days.

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00:01:23,000 --> 00:01:26,000
On our way over to the drill site, we're planning on using the rover's wheels

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to crush some of the nearby veins and examine the freshly broken material.

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00:01:30,000 --> 00:01:35,000
This image from Sol 135 shows an example of how the rover can break open