1
00:00:02,230 --> 00:00:08,950
Hello, I am Justin Maki and I am the engineering
camera lead for the Mars Science Laboratory

2
00:00:08,950 --> 00:00:14,900
mission and a member of the MSL Science Camera
Team and this is your Curiosity Rover Report.

3
00:00:14,900 --> 00:00:19,240
The rover has been investigating the YellowKnife
bay area as part of an effort to pick the

4
00:00:19,240 --> 00:00:24,150
exact location of our first drill activity
on Mars.

5
00:00:24,150 --> 00:00:28,279
The images being returned by Curiosity show
a diverse collection of interesting features,

6
00:00:28,279 --> 00:00:34,850
including sedimentary rocks, pebbles, cracks,
nodules, and veins.

7
00:00:34,850 --> 00:00:38,940
The vein features are seen as a bright white
material, and we see them just about everywhere

8
00:00:38,940 --> 00:00:41,280
we look in Yellowknife bay.

9
00:00:41,280 --> 00:00:46,430
The Chemcam instrument has found that these
veins contain elevated levels of calcium sulfate,

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00:00:46,430 --> 00:00:49,399
likely in the form of bassanite or gypsum.

11
00:00:49,399 --> 00:00:53,920

Gypsum veins are also seen here on Earth and
associated with water percolating through

12
00:00:53,920 --> 00:00:56,760
cracks and fractured rocks.

13
00:00:56,760 --> 00:01:00,570
The exciting news from all of this analysis
is the candidate site where Curiosity will

14
00:01:00,570 --> 00:01:03,920
conduct its first drilling activity.

15
00:01:03,920 --> 00:01:08,040
This site is located only a few meters away
from the rover's current location, and lies

16
00:01:08,040 --> 00:01:10,530
in a flat area, suitable for drilling.

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00:01:10,530 --> 00:01:14,200
The team hopes to drill directly into one
of the veins and place the powder into the

18
00:01:14,200 --> 00:01:16,730
SAM and ChemMin analytical instruments.

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00:01:16,730 --> 00:01:20,220
These instruments will give us detailed information
about the composition of the material.

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00:01:20,220 --> 00:01:23,170
We'll be driving over there in the next
few days.

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00:01:23,170 --> 00:01:26,280
On our way over to the drill site, we're
planning on using the rover's wheels to

22

00:01:26,280 --> 00:01:31,010
crush some of these nearby veins and examine the freshly broken material.

23
00:01:31,010 --> 00:01:36,010
This image from Sol 135 shows an example of how the rover can break open soft rocks with

24
00:01:36,010 --> 00:01:39,710
its wheels, revealing the freshly exposed material.