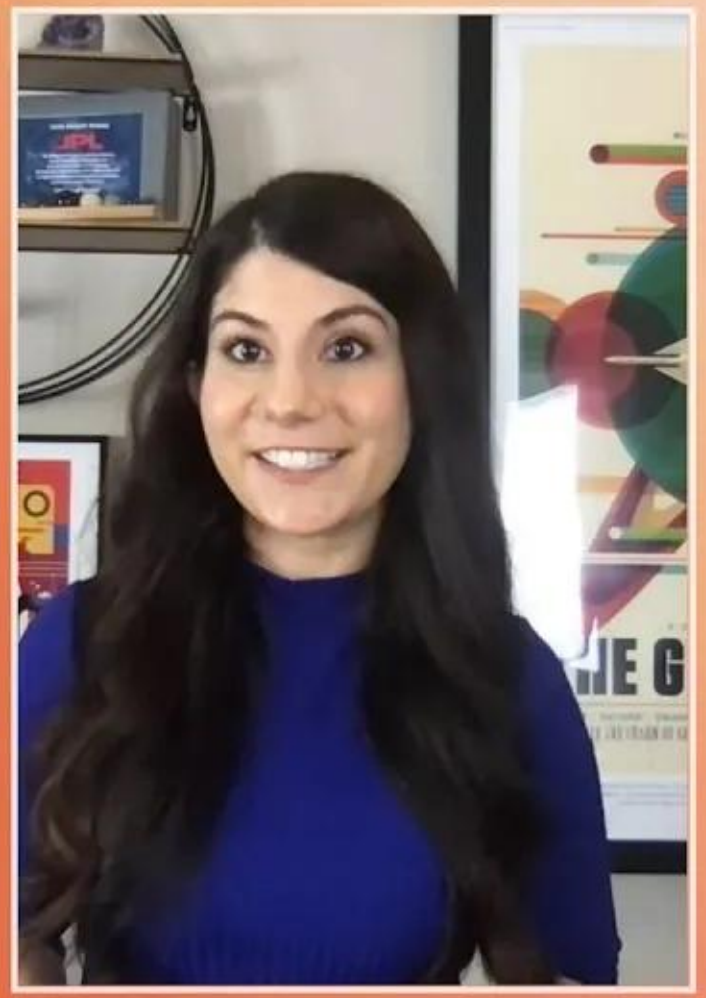
JPL


MARS
2020

1
00:00:07,430 --> 00:00:04,789
to get the latest

2
00:00:08,390 --> 00:00:07,440
updates on the rovers we are joined by

3
00:00:11,030 --> 00:00:08,400
perseverance

4
00:00:11,509 --> 00:00:11,040
surface mission manager jessica samuels

5
00:00:14,070 --> 00:00:11,519
and

6
00:00:15,589 --> 00:00:14,080
curiosity deputy project scientist

7
00:00:17,750 --> 00:00:15,599
abigail freeman

8
00:00:19,029 --> 00:00:17,760
now jessica perseverance has spent the

9
00:00:21,990 --> 00:00:19,039
last month supporting

10
00:00:23,189 --> 00:00:22,000
ingenuity helicopter operations but now

11
00:00:26,470 --> 00:00:23,199
it's moving into

12
00:00:29,429 --> 00:00:26,480
a new phase can you tell us about that

13
00:00:30,150 --> 00:00:29,439

right so with this recent fifth

14
00:00:32,310 --> 00:00:30,160
helicopter

15
00:00:34,229 --> 00:00:32,320
flight we're transitioning from the

16
00:00:36,630 --> 00:00:34,239
technology demonstration phase

17
00:00:38,790 --> 00:00:36,640
to more of an operations demonstration

18
00:00:40,549 --> 00:00:38,800
phase as we now turn our attention

19
00:00:42,630 --> 00:00:40,559
more towards the robotic arm

20
00:00:44,630 --> 00:00:42,640
science-based portion of the mission

21
00:00:47,029 --> 00:00:44,640
and as we prepare for the sample

22
00:00:49,350 --> 00:00:47,039
acquisition phase of the project

23
00:00:51,430 --> 00:00:49,360
this past week we completed our first

24
00:00:52,389 --> 00:00:51,440
close-up robotic arm science target

25
00:00:54,630 --> 00:00:52,399
observation

26
00:00:55,830 --> 00:00:54,640
by the sherlock instrument and as you

27
00:00:58,310 --> 00:00:55,840
can see here

28
00:00:59,110 --> 00:00:58,320
the watson side of that instrument was

29
00:01:01,590 --> 00:00:59,120
placed at

30
00:01:03,590 --> 00:01:01,600
different positions getting closer and

31
00:01:06,789 --> 00:01:03,600
closer and closer to the surface

32
00:01:09,750 --> 00:01:06,799
and finishing at a mere 3.7 millimeters

33
00:01:11,350 --> 00:01:09,760
from the surface and perseverance is

34
00:01:14,469 --> 00:01:11,360
preparing to collect samples

35
00:01:17,990 --> 00:01:14,479
from mars to bring back to earth

36
00:01:21,190 --> 00:01:18,000
how are those preparations going

37
00:01:22,550 --> 00:01:21,200
right well in order to ensure that we

38
00:01:25,830 --> 00:01:22,560

are ready for this

39
00:01:27,510 --> 00:01:25,840
first one of a kind leg of collecting

40
00:01:29,590 --> 00:01:27,520
samples and preparing them

41
00:01:31,109 --> 00:01:29,600
to bring them back to earth we need to

42
00:01:34,069 --> 00:01:31,119
ensure that we can

43
00:01:35,510 --> 00:01:34,079
safely place and load the robotic arm on

44
00:01:38,550 --> 00:01:35,520
the surface of mars

45
00:01:40,710 --> 00:01:38,560
so we first did this by loading the core

46
00:01:43,270 --> 00:01:40,720
drill and pushing against the rover

47
00:01:44,870 --> 00:01:43,280
itself as you can see here in this image

48
00:01:47,350 --> 00:01:44,880
the next day we successfully

49
00:01:50,030 --> 00:01:47,360
demonstrated the capability of placing

50
00:01:51,190 --> 00:01:50,040
the corer on the surface of mars and

51
00:01:53,990 --> 00:01:51,200
perseverance

52
00:01:56,310 --> 00:01:54,000
has been on the move how far has the

53
00:01:59,429 --> 00:01:56,320
rover driven

54
00:01:59,830 --> 00:01:59,439
perseverance has driven 345 meters so

55
00:02:02,310 --> 00:01:59,840
far

56
00:02:04,069 --> 00:02:02,320
over the next couple weeks we hope to

57
00:02:06,310 --> 00:02:04,079
continue to check out more of our

58
00:02:08,949 --> 00:02:06,320
autonomous navigation capabilities

59
00:02:09,589 --> 00:02:08,959
and are excited about the hundreds and

60
00:02:12,150 --> 00:02:09,599
hundreds

61
00:02:13,430 --> 00:02:12,160
of meters ahead thank you for that

62
00:02:16,869 --> 00:02:13,440
update jessica

63
00:02:19,350 --> 00:02:16,879

now we'll turn to abigail perseverance

64
00:02:20,710 --> 00:02:19,360
is the new rover in town but curiosity

65
00:02:23,030 --> 00:02:20,720
is still doing science

66
00:02:24,869 --> 00:02:23,040
in gale crater what are some of the big

67
00:02:28,790 --> 00:02:24,879
stories coming from curiosity

68
00:02:30,550 --> 00:02:28,800
and your team well curiosity we're

69
00:02:33,509 --> 00:02:30,560
continuing to climb mount

70
00:02:35,509 --> 00:02:33,519
sharp we just wrapped up our exploration

71
00:02:37,990 --> 00:02:35,519
of the glen torridan region

72
00:02:40,229 --> 00:02:38,000
and we're now on the hunt for the zone

73
00:02:43,110 --> 00:02:40,239
where we know the rocks will transition

74
00:02:45,110 --> 00:02:43,120
from being these clay-rich rocks that

75
00:02:47,670 --> 00:02:45,120
formed in ancient lakes

76
00:02:49,670 --> 00:02:47,680
to salty rocks filled with a mineral

77
00:02:52,550 --> 00:02:49,680
called sulfate

78
00:02:53,350 --> 00:02:52,560
we began our hunt for this clay sulfate

79
00:02:55,589 --> 00:02:53,360
transition

80
00:02:57,190 --> 00:02:55,599
at a region we informally named

81
00:03:00,550 --> 00:02:57,200
montmarcu

82
00:03:02,949 --> 00:03:00,560
and we parked at the base of uh montmore

83
00:03:04,790 --> 00:03:02,959
where erosion has cut away and made this

84
00:03:07,830 --> 00:03:04,800
big 20 foot high

85
00:03:08,470 --> 00:03:07,840
cliff and so we drilled at the base of

86
00:03:11,910 --> 00:03:08,480
this cliff

87
00:03:14,790 --> 00:03:11,920
we took a selfie and we took

88
00:03:15,750 --> 00:03:14,800

many images of the hundreds of fine

89
00:03:18,710 --> 00:03:15,760
layers that we

90
00:03:20,550 --> 00:03:18,720
see exposed in the side of the cliff and

91
00:03:22,229 --> 00:03:20,560
by analyzing these layers

92
00:03:24,710 --> 00:03:22,239
we're going to understand more about the

93
00:03:25,670 --> 00:03:24,720
geologic processes that have shaped the

94
00:03:29,190 --> 00:03:25,680
area

95
00:03:31,270 --> 00:03:29,200
what is next for curiosity

96
00:03:32,710 --> 00:03:31,280
well after doing a bunch of science at

97
00:03:35,589 --> 00:03:32,720
the base of monmoku we

98
00:03:36,710 --> 00:03:35,599
turned around and we ascended to the top

99
00:03:40,789 --> 00:03:36,720
where we took

100
00:03:43,910 --> 00:03:40,799
an absolutely spectacular 360 degree

101
00:03:46,229 --> 00:03:43,920
color panorama of our view and

102
00:03:48,789 --> 00:03:46,239
i love this image because if you look

103
00:03:49,830 --> 00:03:48,799
off to one side you can see the floor of

104
00:03:52,630 --> 00:03:49,840
gale crater

105
00:03:55,030 --> 00:03:52,640
where curiosity landed we've since

106
00:03:56,949 --> 00:03:55,040
climbed over 1300 feet

107
00:03:58,309 --> 00:03:56,959
to get to where we are now on the side

108
00:04:00,710 --> 00:03:58,319
of the mound and

109
00:04:03,030 --> 00:04:00,720
if you look off to the other side you

110
00:04:04,949 --> 00:04:03,040
can see the terrain further ahead

111
00:04:06,630 --> 00:04:04,959
those are the hills where we know the

112
00:04:07,910 --> 00:04:06,640
sulfate minerals will be from our

113
00:04:10,869 --> 00:04:07,920

orbital data

114
00:04:12,309 --> 00:04:10,879
and so that is where we're headed thanks

115
00:04:14,869 --> 00:04:12,319
for the update abigail

116
00:04:16,189 --> 00:04:14,879
and take a deeper dive on the mission

117
00:04:19,789 --> 00:04:16,199
websites

118
00:04:22,390 --> 00:04:19,799
mars.nasa.gov perseverance and visit

119
00:04:25,510 --> 00:04:22,400
mars.nasa.gov msl

120
00:04:26,790 --> 00:04:25,520
for the curiosity rover and follow at