1
00:00:04,970 --> 00:00:02,119
we're getting brand-new images from

2
00:00:06,800 --> 00:00:04,980
NASA's newest Mars spacecraft the Mars

3
00:00:10,100 --> 00:00:06,810
Reconnaissance Orbiter has made its

4
00:00:11,839 --> 00:00:10,110
first observations from low orbit one of

5
00:00:14,600 --> 00:00:11,849
its three cameras the high-resolution

6
00:00:17,990 --> 00:00:14,610
imaging science experiment or high-rise

7
00:00:20,570 --> 00:00:18,000
is providing unprecedented views of the

8
00:00:22,820 --> 00:00:20,580
red planet each and every one of these

9
00:00:25,009 --> 00:00:22,830
images we are seeing features on Mars

10
00:00:27,019 --> 00:00:25,019
we've never seen before hi rice can

11
00:00:29,359 --> 00:00:27,029
resolve features as small as a few feet

12
00:00:31,130 --> 00:00:29,369
across here's the context image was a

13
00:00:34,670 --> 00:00:31,140

lot more detail in this context image

14
00:00:36,500 --> 00:00:34,680
that you can see here the high-res image

15
00:00:40,610 --> 00:00:36,510
comes a little area there that you see

16
00:00:42,139 --> 00:00:40,620
in yellow will zoom in on that and then

17
00:00:44,060 --> 00:00:42,149
we'll show the overlay of a color

18
00:00:46,369 --> 00:00:44,070
coverage which is just a narrow strip

19
00:00:48,650 --> 00:00:46,379
down the middle of the image but we'll

20
00:00:50,270 --> 00:00:48,660
zoom in yet again and now we're

21
00:00:52,160 --> 00:00:50,280
approaching a full resolution where

22
00:00:54,740 --> 00:00:52,170
we're seeing features as small as a few

23
00:00:57,500 --> 00:00:54,750
feet across this is a beautiful area

24
00:01:01,099 --> 00:00:57,510
this is enhanced false color this is not

25
00:01:02,750 --> 00:01:01,109
where it really looked to us there is in

26
00:01:06,230 --> 00:01:02,760
this area and overlying layer that has

27
00:01:07,640 --> 00:01:06,240
the orange and blue tint thick layer but

28
00:01:09,380 --> 00:01:07,650
it's being stripped away by the wind

29
00:01:12,399 --> 00:01:09,390
this is an active environment on Mars

30
00:01:15,499 --> 00:01:12,409
beneath this we see this light toned

31
00:01:17,539 --> 00:01:15,509
material it's layered as we see here

32
00:01:18,890 --> 00:01:17,549
layers that fill the crater this is the

33
00:01:21,050 --> 00:01:18,900
clay rich material that's of such

34
00:01:23,240 --> 00:01:21,060
interest because it means the

35
00:01:25,880 --> 00:01:23,250
environment here was wet we see a

36
00:01:29,179 --> 00:01:25,890
variety of small scale features we see

37
00:01:31,370 --> 00:01:29,189
small channels as in water we see that

38
00:01:33,600 --> 00:01:31,380

bright material is broken up into little

39
00:01:37,540 --> 00:01:33,610
plates

40
00:01:39,490 --> 00:01:37,550
so we are seeing revealed here a very

41
00:01:41,230 --> 00:01:39,500
ancient world we know that this is very

42
00:01:43,980 --> 00:01:41,240
ancient because the over I overlying

43
00:01:46,420 --> 00:01:43,990
layer even is old and heavily cratered

44
00:01:48,820 --> 00:01:46,430
this was a very different world on Mars

45
00:01:52,300 --> 00:01:48,830
this was a soaking-wet world where we

46
00:01:54,400 --> 00:01:52,310
reformed clays and small-scale

47
00:01:56,560 --> 00:01:54,410
morphologies that we don't normally see

48
00:01:58,600 --> 00:01:56,570
on Mars so there is a history here of

49
00:02:01,870 --> 00:01:58,610
climate change on Mars in the relatively

50
00:02:04,450 --> 00:02:01,880
recent past that we're going to have a

51
00:02:07,779 --> 00:02:04,460
lot of fun trying to decipher with the

52
00:02:09,940 --> 00:02:07,789
multiple instruments on Emeril's this is

53
00:02:12,009 --> 00:02:09,950
only the beginning in early November the

54
00:02:14,320 --> 00:02:12,019
Mars Reconnaissance Orbiter will begin