1
00:00:00,133 --> 00:00:03,503
Later this year, Apollo 17
astronaut and geologist Jack

2
00:00:03,503 --> 00:00:06,173
Schmitt will mark forty-five
years since his first steps on

3
00:00:06,173 --> 00:00:10,444
the moon in December 1972. Those
footprints left an impression on

4
00:00:10,444 --> 00:00:12,446
both the moon and on Schmitt.

5
00:00:16,183 --> 00:00:17,584
“No matter how much preparation

6
00:00:17,584 --> 00:00:23,991
you have for experiences like
stepping on the moon, it’s going

7
00:00:23,991 --> 00:00:26,393
to be more than you ever
anticipated.” Schmitt was the

8
00:00:26,393 --> 00:00:29,196
first trained field geologist to
observe the moon up close and

9
00:00:29,196 --> 00:00:32,232
personal, and he found himself
discovering unexpected things

10
00:00:32,232 --> 00:00:35,669
with every step. “Every rock
that we examined had something

11
00:00:35,669 --> 00:00:39,907

new that I didn’t expect. And surprises are what geologists

12
00:00:39,907 --> 00:00:43,243
like. That’s why you’re exploring – to see the things

13
00:00:43,243 --> 00:00:45,546
that no one has ever seen before.” Schmitt spent a

14
00:00:45,546 --> 00:00:48,348
combined twenty-two hours outside of the spacecraft during

15
00:00:48,348 --> 00:00:51,351
his three excursions on the moon. Before his own trip,

16
00:00:51,351 --> 00:00:54,421
Schmitt trained other Apollo astronauts. Sharing with them

17
00:00:54,421 --> 00:00:57,357
his in-depth knowledge of field work. “The main thing was to

18
00:00:57,357 --> 00:01:01,995
expose them to as many different geological experiences as we

19
00:01:01,995 --> 00:01:04,898
possibly could. Get them out in the field – don’t let them sit

20
00:01:04,898 --> 00:01:07,768
in the classroom.” He treated training scenarios on Earth the

21
00:01:07,768 --> 00:01:10,938

same way he would if they were
on the moon. Including simulated

22
00:01:10,938 --> 00:01:13,707
equipment, backpacks and cameras
strapped to the front of

23
00:01:13,707 --> 00:01:17,010
spacesuits. Astronauts could
then focus on what differences

24
00:01:17,010 --> 00:01:19,580
in the rocks they were seeing,
and what rock samples were best

25
00:01:19,580 --> 00:01:22,482
to collect. Essentially giving
them the fundamental field

26
00:01:22,482 --> 00:01:25,886
geological experiences that they
needed to succeed. The four or

27
00:01:25,886 --> 00:01:28,622
five days per month Schmitt
spent training astronauts in the

28
00:01:28,622 --> 00:01:31,692
field really did made a
difference. “The quality and

29
00:01:31,692 --> 00:01:35,862
diversity of the Apollo sample
collection, independent of

30
00:01:35,862 --> 00:01:39,499
Apollo 17 where you had an
experienced geologist, the

31
00:01:39,499 --> 00:01:42,169

quality and diversity of that
sample collection is just

32
00:01:42,169 --> 00:01:44,037
remarkable.”
Fortunately, the current

33
00:01:44,037 --> 00:01:46,940
Lunar Reconnaissance Orbiter
mission, or LRO, is changing

34
00:01:46,940 --> 00:01:50,010
the game; bringing back high-
quality photography of the moon

35
00:01:50,010 --> 00:01:53,013
that Schmitt only wished he’d
seen before his own trip. “The

36
00:01:53,013 --> 00:01:57,084
Lunar Reconnaissance Orbiter
program now has provided us with

37
00:01:57,084 --> 00:02:00,887
a much, much higher resolution
suite of photographs for any

38
00:02:00,887 --> 00:02:03,390
future astronauts.” What we
learned from the Apollo missions

39
00:02:03,390 --> 00:02:06,460
helped lay the groundwork for
LRO, and LRO will help guide

40
00:02:06,460 --> 00:02:10,964
future explorers. “Every new
environment in which a geologist

41
00:02:10,964 --> 00:02:14,735

works is usually very different
than the last, but you have

42
00:02:14,735 --> 00:02:18,005
learned things from your
previous experiences that do in

43
00:02:18,005 --> 00:02:23,443
fact enable you to maximize the
value of your new experience.”

44
00:02:23,443 --> 00:02:26,613
Schmitt has his fingers crossed
for future moon exploration, a

45
00:02:26,613 --> 00:02:29,549
landscape he considers holds
answers to many questions about

46
00:02:29,549 --> 00:02:32,819
the early solar system. “You can
hear people talk about it, but