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00:00:01,690 --> 00:00:03,770  
>> Michael Curie: We are here  
at NASA's Kennedy Space Center

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00:00:03,770 --> 00:00:06,800  
in Florida, joined today  
by Cheryl McPhillips.

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00:00:06,800 --> 00:00:11,710  
Cheryl is NASA's Crew  
Program Partner Manager

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00:00:11,710 --> 00:00:14,160  
for the Sierra Nevada  
Corporation.

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00:00:14,160 --> 00:00:14,680  
Welcome.

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00:00:14,680 --> 00:00:15,040  
>> Cheryl McPhillips: Thank you.

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00:00:15,040 --> 00:00:16,240  
>> Michael Curie: As part

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00:00:16,240 --> 00:00:20,280  
of the Commercial Crew Program  
Integrated Capability or CCIcap,

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00:00:20,280 --> 00:00:24,000  
NASA recently awarded  
212.5 million dollars

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00:00:24,000 --> 00:00:25,610  
to Sierra Nevada Corporation

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00:00:25,610 --> 00:00:28,610  
to keep things rolling  
and moving ahead.

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00:00:28,610 --> 00:00:30,910

Can you tell us a little  
bit more about that?

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00:00:30,910 --> 00:00:33,580

>> Cheryl McPhillips: Well,  
there was a competition

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00:00:33,580 --> 00:00:36,860

and Sierra Nevada was one of  
the three that was selected

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00:00:36,860 --> 00:00:39,040

and so they're planning

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00:00:39,040 --> 00:00:41,920

to further develop their  
Dream Chaser system,

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00:00:41,920 --> 00:00:43,860

which is a lifting  
body which kind

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00:00:43,860 --> 00:00:46,840

of makes it have a little  
more pizzazz maybe then some

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00:00:46,840 --> 00:00:48,540

of the other vehicles.

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00:00:48,540 --> 00:00:51,830

It also has some green  
technology propellants

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00:00:51,830 --> 00:00:54,920

that are new that haven't been  
used before by NASA before

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00:00:54,920 --> 00:00:57,640  
in any human spacecraft.

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00:00:57,640 --> 00:01:00,400  
So, we're pretty  
excited about it.

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00:01:00,400 --> 00:01:01,620  
>> Michael Curie:  
Yea, it is exciting

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00:01:01,620 --> 00:01:03,270  
and you are based  
here at the Kennedy.

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00:01:03,270 --> 00:01:03,380  
>> Cheryl McPhillips: Right.

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00:01:03,380 --> 00:01:04,060  
>> Michael Curie:  
And that is the home

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00:01:04,060 --> 00:01:05,750  
of the Commercial Crew Program.

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00:01:05,750 --> 00:01:07,320  
What were you doing prior

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00:01:07,320 --> 00:01:10,790  
to joining the Commercial  
Crew Program?

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00:01:10,790 --> 00:01:11,100  
>> Cheryl McPhillips: Prior

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00:01:11,100 --> 00:01:14,370  
to joining Commercial Crew  
I was working on Orion,

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00:01:14,370 --> 00:01:17,160  
the manned spacecraft that's  
going to do the exploration

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00:01:17,160 --> 00:01:19,720  
and also worked space  
station before that.

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00:01:19,720 --> 00:01:23,010  
And ions ago when I started  
here I worked the space lab.

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00:01:23,010 --> 00:01:24,850  
>> Michael Curie: So,  
now in your new role

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00:01:24,850 --> 00:01:28,490  
as the partner manager  
for Sierra Nevada,

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00:01:28,490 --> 00:01:30,760  
what roles do you have?

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00:01:30,760 --> 00:01:32,820  
>> Cheryl McPhillips: Well,  
basically I'm the liaison

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00:01:32,820 --> 00:01:35,010  
between NASA and Sierra Nevada,

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00:01:35,010 --> 00:01:37,720  
so I'm kind of the  
communication conduit

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00:01:37,720 --> 00:01:39,780  
if you will between the two.

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00:01:39,780 --> 00:01:42,720  
I try to make sure that  
Sierra Nevada is successful

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00:01:42,720 --> 00:01:47,310

and that anything that NASA has  
that they need I try to advocate

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00:01:47,310 --> 00:01:51,300

for them to get it and also  
then I try to communicate back

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00:01:51,300 --> 00:01:53,670

to NASA exactly what  
Sierra Nevada is doing,

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00:01:53,670 --> 00:01:56,160

where their issues are,  
where their successes are

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00:01:56,160 --> 00:01:57,450

and how they're progressing.

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00:01:57,450 --> 00:02:00,400

>> Michael Curie: So, this  
is some award of the CCIcap?

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00:02:00,400 --> 00:02:03,190

Did you hold come  
kick-off meetings?

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00:02:03,190 --> 00:02:03,420

>> Cheryl McPhillips: Yea,

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00:02:03,420 --> 00:02:05,700

just last week we had our  
first kick-off meeting

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00:02:05,700 --> 00:02:08,500

out in Louisville, Colorado.

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00:02:08,500 --> 00:02:11,070

So, we discussed  
their whole plan to go

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00:02:11,070 --> 00:02:12,750

from where they are  
today on their design

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00:02:12,750 --> 00:02:15,010

to crude orbital flight.

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00:02:15,010 --> 00:02:17,450

>> Michael Curie: Yea,  
one of the new aspects

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00:02:17,450 --> 00:02:21,740

that NASA has undertaken in this  
whole Commercial Crew Program is

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00:02:21,740 --> 00:02:24,010

the Space Act Agreement.

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00:02:24,010 --> 00:02:26,810

And can you tell us a little  
bit more about how that works

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00:02:26,810 --> 00:02:29,050

for you for NASA  
and for the company.

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00:02:29,050 --> 00:02:29,140

>> Cheryl McPhillips: Well,

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00:02:29,140 --> 00:02:32,050

the Space Act Agreements  
are for public purpose.

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00:02:32,050 --> 00:02:37,580

Basically its two parties coming  
together for a mutual goal:

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00:02:37,580 --> 00:02:41,600

NASA's goal is to promote a commercial space transportation

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00:02:41,600 --> 00:02:45,240

system and Sierra Nevada's goal is again they want to have

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00:02:45,240 --> 00:02:49,120

to their Dream Chaser to fly astronauts or even tourists

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00:02:49,120 --> 00:02:51,430

or even doing other types of research in space.

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00:02:51,430 --> 00:02:54,490

So, we come together, NASA with some money,

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00:02:54,490 --> 00:02:58,670

the Sierra Nevada Corporation with a design and hardware

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00:02:58,670 --> 00:03:00,450

and further it towards the mutual goal

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00:03:00,450 --> 00:03:02,100

of flying humans in space.

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00:03:02,100 --> 00:03:04,960

>> Michael Curie: So, you in role as the partner manager,

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00:03:04,960 --> 00:03:07,850

you're sort of advocate for the company and for NASA.

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00:03:07,850 --> 00:03:10,420

You're somewhat embedded  
in Sierra Nevada?

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00:03:10,420 --> 00:03:10,690

>> Cheryl McPhillips: Correct.

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00:03:10,690 --> 00:03:15,140

I have a person out Val  
Enthorn out in Louisville,

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00:03:15,140 --> 00:03:16,180

that's my resident office.

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00:03:16,180 --> 00:03:20,270

But I am traveling a  
lot out to Louisville

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00:03:20,270 --> 00:03:22,250

to be with Sierra Nevada.

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00:03:22,250 --> 00:03:24,820

>> Michael Curie: With the  
Space Act Agreement in place,

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00:03:24,820 --> 00:03:28,180

Sierra Nevada and the other  
companies have a series

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00:03:28,180 --> 00:03:30,900

of milestones that  
they must meet in order

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00:03:30,900 --> 00:03:35,230

to make the monetary milestone  
gains that they're looking for.

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00:03:35,230 --> 00:03:37,730

Can you tell us how  
that's all laid out

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00:03:37,730 --> 00:03:39,120  
and set up for Sierra Nevada.

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00:03:39,120 --> 00:03:40,720  
>> Cheryl McPhillips: For  
Sierra we had nine milestones.

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00:03:40,720 --> 00:03:42,710  
We had our first one last week.

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00:03:42,710 --> 00:03:46,420  
Then we have two safety review  
milestones that will be coming

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00:03:46,420 --> 00:03:49,550  
up and an integrated system  
baseline review which kind

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00:03:49,550 --> 00:03:52,850  
of says this-- this is where  
the system is right now.

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00:03:52,850 --> 00:03:56,320  
It's past the preliminary design  
review phase that we refer to.

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00:03:56,320 --> 00:03:58,500  
So, we're going to  
get a baseline review

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00:03:58,500 --> 00:04:00,500  
and say this is how the  
hardware is and then they'll go

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00:04:00,500 --> 00:04:02,580  
from there towards their  
critical design review,

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00:04:02,580 --> 00:04:06,120  
which is usually considered  
like 90 percent complete.

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00:04:06,120 --> 00:04:08,260  
Other major milestones  
they have,

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00:04:08,260 --> 00:04:10,930  
they have their engineering test  
article, which they're going

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00:04:10,930 --> 00:04:12,180  
to drop from a helicopter.

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00:04:12,180 --> 00:04:14,660  
I don't know if you saw  
pictures of it during CCdev 2;

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00:04:14,660 --> 00:04:18,030  
the flew below a helicopter.

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00:04:18,030 --> 00:04:20,960  
Anyhow they're going to  
drop that in November

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00:04:20,960 --> 00:04:23,290  
and do some test landings.

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00:04:23,290 --> 00:04:25,240  
So, that's a full size mock-up.

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00:04:25,240 --> 00:04:26,340  
>> Michael Curie:  
You mentioned CCdev2,

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00:04:26,340 --> 00:04:29,270  
Sierra Nevada has been  
a partner with NASA

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00:04:29,270 --> 00:04:30,460

through that element as well.

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00:04:30,460 --> 00:04:32,430

So, they're not brand

new because--

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00:04:32,430 --> 00:04:33,580

>> Cheryl McPhillips:

They're a continuum.

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00:04:33,580 --> 00:04:35,340

>> Michael Curie: Is there kind  
of like a comfort level growing

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00:04:35,340 --> 00:04:37,560

between the company and NASA?

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00:04:37,560 --> 00:04:37,850

>> Cheryl McPhillips: Yes,

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00:04:37,850 --> 00:04:41,380

I think we learned a lot  
during the CCdev 2 phase.

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00:04:41,380 --> 00:04:44,560

You know sometimes we  
had different definitions

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00:04:44,560 --> 00:04:46,720

that were called out  
in the milestones.

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00:04:46,720 --> 00:04:50,100

The milestones have entrance  
and exit criteria that they have

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00:04:50,100 --> 00:04:52,430

to meet in order to get

paid for that milestone

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00:04:52,430 --> 00:04:55,390  
and there were cases where  
we thought the milestones,

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00:04:55,390 --> 00:04:57,760  
the entrance and exit criteria  
stood for different things.

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00:04:57,760 --> 00:05:01,660  
So, we've redefined those  
and we're now trying to talk

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00:05:01,660 --> 00:05:04,290  
up front before the milestone  
and clear any expectations

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00:05:04,290 --> 00:05:06,160  
up before the milestone.

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00:05:06,160 --> 00:05:07,300  
>> Michael Curie: Well,  
there's a lot of excitement

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00:05:07,300 --> 00:05:10,380  
that is growing between NASA  
and all these companies.

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00:05:10,380 --> 00:05:13,390  
This is a real exciting time  
with the commercial partners.

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00:05:13,390 --> 00:05:17,330  
Can you sense the excitement  
from your role with NASA?

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00:05:17,330 --> 00:05:19,830  
>> Cheryl McPhillips: Well,  
I'm very excited to be working

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00:05:19,830 --> 00:05:22,040  
with Sierra Nevada  
and to be back

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00:05:22,040 --> 00:05:24,320  
around some hardware you know,  
since the shuttle retired.

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00:05:24,320 --> 00:05:27,360  
It's been a little depressing  
around here, so it's good

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00:05:27,360 --> 00:05:29,930  
to be back with some  
hardware that's being built

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00:05:29,930 --> 00:05:31,020  
and the view of the company.

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00:05:31,020 --> 00:05:33,200  
And last week when I was out  
there I was talking to one

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00:05:33,200 --> 00:05:36,190  
of the engineers for Sierra  
Nevada, and very excited

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00:05:36,190 --> 00:05:38,870  
about his actuator  
that is the hinge

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00:05:38,870 --> 00:05:41,540  
that connects their body  
flap to their space plane.

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00:05:41,540 --> 00:05:43,850  
And it was like he was  
talking about his child.

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00:05:43,850 --> 00:05:45,020

He was just so excited.

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00:05:45,020 --> 00:05:46,840

>> Michael Curie: Well  
they are a unique company

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00:05:46,840 --> 00:05:49,050

in this commercial crew program

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00:05:49,050 --> 00:05:50,810

and that they have  
the lifting body,

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00:05:50,810 --> 00:05:54,130

the HL-20 lifting body  
that-- it's based on NASA's--

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00:05:54,130 --> 00:05:54,760

>> Cheryl McPhillips:  
It is based on it.

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00:05:54,760 --> 00:05:57,860

>> HL-20 and it's also somewhat  
reminiscent then of the shuttle

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00:05:57,860 --> 00:05:59,370

and the fact that it lands.

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00:05:59,370 --> 00:06:00,160

>> Cheryl McPhillips:  
I don't think they

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00:06:00,160 --> 00:06:01,910

like to be called the,  
"Little Shuttle", so.

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00:06:01,910 --> 00:06:02,500

>> Michael Curie: No.

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00:06:02,500 --> 00:06:06,010

No, but how does that, you know  
how does that make you feel

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00:06:06,010 --> 00:06:07,360

since you have been  
around flight hardware

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00:06:07,360 --> 00:06:08,950

and shuttle hardware  
for so many years?

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00:06:08,950 --> 00:06:10,310

>> Cheryl McPhillips: Well it--

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00:06:10,310 --> 00:06:11,600

I love to be around  
the hardware.

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00:06:11,600 --> 00:06:13,660

You know if I'm having a  
hard day I used to always go

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00:06:13,660 --> 00:06:17,370

down into the space  
station in the SSPF and walk

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00:06:17,370 --> 00:06:19,150

around the hardware just  
to kind of lift my spirits.

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00:06:19,150 --> 00:06:20,100

So, it's good to be able to be

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00:06:20,100 --> 00:06:21,650

around some flight  
hardware again.

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00:06:21,650 --> 00:06:23,690

>> Michael Curie: Well, when you're out and you're talking

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00:06:23,690 --> 00:06:27,080

to your friends and family, how do you describe your job?

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00:06:27,080 --> 00:06:29,300

>> Cheryl McPhillips: Well, I describe my job as working

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00:06:29,300 --> 00:06:31,870

on the next space plane to take NASA astronauts

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00:06:31,870 --> 00:06:33,950

to the International Space Station.

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00:06:33,950 --> 00:06:34,730

>> Michael Curie: Great.

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00:06:34,730 --> 00:06:36,850

Cheryl, thank you very, very much for being here today.