



1  
00:00:04,880 --> 00:00:02,929  
everybody thank you all for coming I

2  
00:00:07,839 --> 00:00:04,890  
want to welcome you all here tonight for

3  
00:00:13,100 --> 00:00:07,849  
this very very special anniversary

4  
00:00:18,550 --> 00:00:13,110  
celebration for Apollo 15 it's a special

5  
00:00:21,080 --> 00:00:18,560  
special event for me to be here be the

6  
00:00:23,150 --> 00:00:21,090  
chairman of the board of astronaut

7  
00:00:27,769 --> 00:00:23,160  
scholarship foundation as of last May

8  
00:00:29,660 --> 00:00:27,779  
it's a very very special event and we

9  
00:00:33,729 --> 00:00:29,670  
thank you all for being here and

10  
00:00:37,970 --> 00:00:33,739  
supporting us and honoring good friends

11  
00:00:49,160 --> 00:00:37,980  
and great American heroes the crew of

12  
00:00:54,350 --> 00:00:49,170  
Apollo 15 we've got people here from all

13  
00:00:57,470 --> 00:00:54,360

of almost all over the world and so not

14

00:01:00,529 --> 00:00:57,480

only our US supporters but people

15

00:01:03,049 --> 00:01:00,539

friends from Italy and people from South

16

00:01:07,100 --> 00:01:03,059

Africa soon to be naturalized citizens

17

00:01:09,500 --> 00:01:07,110

or almost and and so we just appreciate

18

00:01:12,160 --> 00:01:09,510

y'all support

19

00:01:16,070 --> 00:01:12,170

it's what a great evening we're having

20

00:01:18,580 --> 00:01:16,080

as a newly elected chairman I must say

21

00:01:23,240 --> 00:01:18,590

it as an honor to be here and to lead

22

00:01:25,820 --> 00:01:23,250

such an amazing organization our staff

23

00:01:27,940 --> 00:01:25,830

has worked very very hard to pull this

24

00:01:32,359 --> 00:01:27,950

event off and so we hope that you all

25

00:01:34,429 --> 00:01:32,369

enjoy it and I want to thank all of them

26  
00:01:36,429 --> 00:01:34,439  
which I'll do appropriately in a few

27  
00:01:40,039 --> 00:01:36,439  
minutes

28  
00:01:42,859 --> 00:01:40,049  
you know nobody needs to have me tell

29  
00:01:46,039 --> 00:01:42,869  
you how important the work that we are

30  
00:01:48,499 --> 00:01:46,049  
doing in this organization is you've

31  
00:01:50,690 --> 00:01:48,509  
heard from Ashley earlier and she is

32  
00:01:52,580 --> 00:01:50,700  
just one of hundreds of our astronaut

33  
00:01:55,100 --> 00:01:52,590  
scholars who are out there making

34  
00:01:58,539 --> 00:01:55,110  
scientific breakthroughs and leading

35  
00:02:00,980 --> 00:01:58,549  
America into our technological future

36  
00:02:02,780 --> 00:02:00,990  
the foundation could not award these

37  
00:02:06,620 --> 00:02:02,790  
scholarships with a course without your

38  
00:02:10,850 --> 00:02:06,630

loyal support and so please continue to

39

00:02:13,460 --> 00:02:10,860

give and give big we hopes that we can

40

00:02:18,100 --> 00:02:13,470

increase our scholarships

41

00:02:22,819 --> 00:02:18,110

and support the new technological

42

00:02:24,259 --> 00:02:22,829

revolution in the u.s. it's I think it's

43

00:02:27,259 --> 00:02:24,269

one of the biggest investments we can

44

00:02:32,270 --> 00:02:27,269

all make is to help these aspiring young

45

00:02:37,729 --> 00:02:32,280

students and the in the science and

46

00:02:40,460 --> 00:02:37,739

engineering field we've got our sponsors

47

00:02:44,780 --> 00:02:40,470

logos are behind us here so I'd like to

48

00:02:48,080 --> 00:02:44,790

recognize our sponsors first our friends

49

00:02:55,420 --> 00:02:48,090

of the Courtyard by Marriott in Cocoa

50

00:03:00,890 --> 00:02:58,610

Maria Shelton is with him and Thank You

51  
00:03:05,000 --> 00:03:00,900  
Maria we appreciate all your great

52  
00:03:09,670 --> 00:03:05,010  
support thank you so much and a long

53  
00:03:12,250 --> 00:03:09,680  
time ASF Board of Trustees member and

54  
00:03:14,930 --> 00:03:12,260  
tremendous supporter of this

55  
00:03:18,860 --> 00:03:14,940  
organization Jim long and I know Jim was

56  
00:03:25,759 --> 00:03:18,870  
Sam so Jim earlier with Jim there yo hey

57  
00:03:28,250 --> 00:03:25,769  
Jim wave to the crowd and it's just very

58  
00:03:30,979 --> 00:03:28,260  
very special to have supporters such as

59  
00:03:34,189 --> 00:03:30,989  
Jim to be with us on just about every

60  
00:03:37,970 --> 00:03:34,199  
event we have as well as our friends

61  
00:03:40,460 --> 00:03:37,980  
from NASA who help support us Kennedy

62  
00:03:44,479 --> 00:03:40,470  
Space Center Director Bob Cabana is here

63  
00:03:49,430 --> 00:03:44,489

there's where's Bob oh there's Bob they

64

00:03:53,420 --> 00:03:49,440  
are our heroes Shuttle astronaut

65

00:03:56,990 --> 00:03:53,430  
commander and center director his

66

00:04:02,210 --> 00:03:57,000  
external relations director Cheryl is

67

00:04:05,390 --> 00:04:02,220  
here is Cheryl and also Pam steel the

68

00:04:09,909 --> 00:04:05,400  
chief of public services there's Pam

69

00:04:12,259 --> 00:04:09,919  
yeah thanks Pam appreciate your support

70

00:04:16,430 --> 00:04:12,269  
we're so glad that y'all could join us

71

00:04:20,149 --> 00:04:16,440  
tonight and also here is Delaware North

72

00:04:23,000 --> 00:04:20,159  
at parks and resorts they're operating

73

00:04:26,149 --> 00:04:23,010  
the Kennedy Space Center Visitor Center

74

00:04:26,990 --> 00:04:26,159  
I should say complex and so they are

75

00:04:29,990 --> 00:04:27,000  
wonderful spa

76  
00:04:32,420 --> 00:04:30,000  
sir in a wonderful partner for us and we

77  
00:04:34,700 --> 00:04:32,430  
have been friends with Delaware North

78  
00:04:39,110 --> 00:04:34,710  
over the years and Bill Moore is here

79  
00:04:40,820 --> 00:04:39,120  
thank you Bill for supporting us we

80  
00:04:44,540 --> 00:04:40,830  
really really thank you for all that you

81  
00:04:46,070 --> 00:04:44,550  
do for the foundation and for the space

82  
00:04:50,390 --> 00:04:46,080  
program as a whole

83  
00:04:52,880 --> 00:04:50,400  
and finally we have Ron I mean Carl runs

84  
00:04:56,240 --> 00:04:52,890  
from who's our photographer there he is

85  
00:04:58,550 --> 00:04:56,250  
he does all the pictures and he's a

86  
00:05:03,020 --> 00:04:58,560  
faithful supporter for us and we

87  
00:05:08,420 --> 00:05:03,030  
certainly appreciate his his endeavor in

88  
00:05:10,490 --> 00:05:08,430

his support so all of these

89

00:05:12,440 --> 00:05:10,500

organizations are supportive of the

90

00:05:14,860 --> 00:05:12,450

foundation and our mission to back the

91

00:05:19,670 --> 00:05:14,870

best and brightest college students

92

00:05:21,860 --> 00:05:19,680

producing pursuing their stem degrees

93

00:05:24,470 --> 00:05:21,870

science technology engineering and

94

00:05:26,450 --> 00:05:24,480

mathematics while we're also promoting

95

00:05:29,409 --> 00:05:26,460

the importance of technology and space

96

00:05:32,420 --> 00:05:29,419

exploration with events such as these

97

00:05:35,690 --> 00:05:32,430

last but certainly not least I need to

98

00:05:39,290 --> 00:05:35,700

thank the a SFF a yes astronaut

99

00:05:42,080 --> 00:05:39,300

scholarship foundation team and the core

100

00:05:47,120 --> 00:05:42,090

group of volunteers Lynn LeBlanc and

101  
00:05:51,350 --> 00:05:47,130  
worked tirelessly night and day and all

102  
00:05:55,700 --> 00:05:51,360  
the girls involved to Kristin's and

103  
00:05:57,320 --> 00:05:55,710  
Nicole and Beth and Jessie where is

104  
00:05:59,060 --> 00:05:57,330  
everybody you'll wave your hands at

105  
00:06:02,409 --> 00:05:59,070  
least you're here I know we just thank

106  
00:06:05,930 --> 00:06:02,419  
it so much there they are

107  
00:06:07,790 --> 00:06:05,940  
for helping us out and just doing a

108  
00:06:11,480 --> 00:06:07,800  
great job to make it that's a wonderful

109  
00:06:14,750 --> 00:06:11,490  
evening for everyone I really enjoy

110  
00:06:17,450 --> 00:06:14,760  
working with them and to getting to know

111  
00:06:20,480 --> 00:06:17,460  
them on a personal level and also just

112  
00:06:22,040 --> 00:06:20,490  
to have this opportunity to work with

113  
00:06:27,560 --> 00:06:22,050

such a great get bunch of gals that

114

00:06:29,930 --> 00:06:27,570

really believe in what we're doing the

115

00:06:31,940 --> 00:06:29,940

we also have a group of great break

116

00:06:35,360 --> 00:06:31,950

group of volunteers as I said who have

117

00:06:38,360 --> 00:06:35,370

always here to help us put together this

118

00:06:40,670 --> 00:06:38,370

great event tonight and they work on a

119

00:06:42,560 --> 00:06:40,680

daily basis for mourning tonight too

120

00:06:46,490 --> 00:06:42,570

sure that the foundation continues to

121

00:06:49,420 --> 00:06:46,500

grow and surpass of the the vision of

122

00:06:52,219 --> 00:06:49,430

its founders who were the original seven

123

00:07:00,230 --> 00:06:52,229

astronauts so let's give them all a

124

00:07:04,189 --> 00:07:00,240

round of applause and so to start our

125

00:07:06,980 --> 00:07:04,199

program off this evening we would like

126  
00:07:10,340 --> 00:07:06,990  
you to welcome a great hero and a great

127  
00:07:24,500 --> 00:07:10,350  
friend of mine a mentor of mine my good

128  
00:07:32,790 --> 00:07:26,780  
Thank You charlie

129  
00:07:35,730 --> 00:07:32,800  
ladies and gentlemen we gather this

130  
00:07:40,790 --> 00:07:35,740  
evening do you celebrate the 40th

131  
00:07:53,010 --> 00:07:40,800  
anniversary of the flight of Apollo 15

132  
00:08:00,230 --> 00:07:53,020  
to Hadley rim now 11 12 13 and 14 had

133  
00:08:10,170 --> 00:08:05,450  
Apollo 15 would not only be commanded by

134  
00:08:18,720 --> 00:08:10,180  
but manned by a completely Air Force

135  
00:08:25,400 --> 00:08:18,730  
crew they would be the fourth flight to

136  
00:08:34,500 --> 00:08:25,410  
successfully touchdown on luna they

137  
00:08:38,459 --> 00:08:34,510  
called it a voyage to Hadley rill but

138  
00:08:45,360 --> 00:08:38,469

that's a little like saying the shuttle

139

00:08:54,650 --> 00:08:45,370

lands at Indian River close but not

140

00:09:01,410 --> 00:08:54,660

exactly Apollo 15 actually landed

141

00:09:05,810 --> 00:09:01,420

intentionally at a place called Pallas

142

00:09:18,940 --> 00:09:08,590

in this building you will find that

143

00:09:23,240 --> 00:09:18,950

defined as the marsh of decay other

144

00:09:28,490 --> 00:09:23,250

Latin experts say a more accurate

145

00:09:35,720 --> 00:09:28,500

description is either the rotten marsh

146

00:09:40,160 --> 00:09:35,730

or the rotting Marsh the crew kept this

147

00:09:43,220 --> 00:09:40,170

pretty well hidden from the press I'll

148

00:09:48,530 --> 00:09:43,230

defer to Dave and Al to explain why they

149

00:09:54,260 --> 00:09:48,540

picked it in the first place now all all

150

00:09:57,980 --> 00:09:54,270

the Astros and the flight directors and

151

00:10:03,590 --> 00:09:57,990

controllers were familiar with the term

152

00:10:06,800 --> 00:10:03,600

sim the simulation exercises that we

153

00:10:09,710 --> 00:10:06,810

depended upon to prepare us for the

154

00:10:18,500 --> 00:10:09,720

perplexing anomalies that inevitably

155

00:10:23,600 --> 00:10:18,510

accompanied actual flight but now had a

156

00:10:28,840 --> 00:10:23,610

different kind of sim it was the

157

00:10:32,780 --> 00:10:28,850

scientific instrument module right

158

00:10:35,660 --> 00:10:32,790

packed with all kinds of measuring

159

00:10:42,440 --> 00:10:35,670

instruments for determine determining

160

00:10:48,440 --> 00:10:42,450

the hidden secrets of Luna now put

161

00:10:56,110 --> 00:10:48,450

yourself in AI's place you're on your

162

00:11:02,330 --> 00:10:56,120

first trip into space you find yourself

163

00:11:07,900 --> 00:11:02,340

240,000 miles away from home in some

164

00:11:11,920 --> 00:11:07,910

thirty ton spacecraft and your crewmates

165

00:11:22,240 --> 00:11:11,930

have deserted you

166

00:11:31,550 --> 00:11:24,650

well maybe you have your teddy bear with

167

00:11:35,980 --> 00:11:31,560

you but you are in complete command and

168

00:11:41,740 --> 00:11:35,990

you have the sole responsibility for

169

00:11:44,000 --> 00:11:41,750

doing the pilot e doing the navigation

170

00:11:48,380 --> 00:11:44,010

managing the myriad of spacecraft

171

00:11:54,500 --> 00:11:48,390

systems communicating with Mission

172

00:11:59,380 --> 00:11:54,510

Control making your own meals doing the

173

00:12:04,610 --> 00:11:59,390

housecleaning and in top of all that

174

00:12:08,920 --> 00:12:04,620

operating a dozen or more very complex

175

00:12:14,000 --> 00:12:08,930

suite of instruments cameras

176  
00:12:18,530 --> 00:12:14,010  
spectrometers lasers etc to the complete

177  
00:12:21,260 --> 00:12:18,540  
satisfaction of some very demanding

178  
00:12:30,760 --> 00:12:21,270  
principal events investigators back on

179  
00:12:36,140 --> 00:12:30,770  
earth and should the lunar module crew

180  
00:12:41,120 --> 00:12:36,150  
Dave and Jim get themselves in some sort

181  
00:12:47,570 --> 00:12:41,130  
of an errant orbit after launching from

182  
00:12:51,320 --> 00:12:47,580  
the lunar surface you would be required

183  
00:12:54,740 --> 00:12:51,330  
to find a way using your own propulsion

184  
00:12:58,520 --> 00:12:54,750  
and navigation to rendezvous with the

185  
00:13:04,600 --> 00:12:58,530  
lunar module and rescue your cue mates

186  
00:13:11,980 --> 00:13:04,610  
of crew mates all by yourself a very

187  
00:13:22,970 --> 00:13:18,320  
continually missed or neglected the

188  
00:13:28,940 --> 00:13:22,980

importance and the difficulty of a CMPs

189

00:13:40,569 --> 00:13:28,950

job but all of us here tonight certainly

190

00:13:51,949 --> 00:13:46,449

the Apollo 13 and Apollo 15 crew were

191

00:13:55,819 --> 00:13:51,959

particularly physically fit they could

192

00:14:02,120 --> 00:13:55,829

have handled the lunar surface work with

193

00:14:07,699 --> 00:14:02,130

ease so it's a bit ironic that they were

194

00:14:13,040 --> 00:14:07,709

the first to get a sort of a Jeep to

195

00:14:17,569 --> 00:14:13,050

ride around in of course the jeep added

196

00:14:20,720 --> 00:14:17,579

weight required the lunar module to have

197

00:14:23,600 --> 00:14:20,730

more fuel for the descent to the lunar

198

00:14:28,759 --> 00:14:23,610

surface and the extra fuel required

199

00:14:32,079 --> 00:14:28,769

bigger tanks and all of these plus the

200

00:14:37,150 --> 00:14:32,089

extra big macs that the crew demanded

201  
00:14:53,509 --> 00:14:43,790  
the Jeep which they called the LRV NASA

202  
00:14:59,060 --> 00:14:53,519  
loves acronyms did allow Dave and Jim to

203  
00:15:07,260 --> 00:14:59,070  
actually go from rotting Marsh over to

204  
00:15:10,990 --> 00:15:07,270  
Hadley room there by semi legitimizing

205  
00:15:18,840 --> 00:15:11,000  
they're calling the summer vacation of

206  
00:15:27,300 --> 00:15:18,850  
voyage to Hadley real much much of the

207  
00:15:30,820 --> 00:15:27,310  
film and recorded data from Al's sim

208  
00:15:33,220 --> 00:15:30,830  
would be located back in this service

209  
00:15:38,490 --> 00:15:33,230  
much of a way back behind where they

210  
00:15:41,220 --> 00:15:38,500  
were staying and it would be destroyed

211  
00:15:45,580 --> 00:15:41,230  
during the re-entry into the Earth's

212  
00:15:53,470 --> 00:15:45,590  
atmosphere so al had to put on his

213  
00:15:57,400 --> 00:15:53,480

spacesuit and go out and get it he did

214

00:16:01,300 --> 00:15:57,410

an Eevee a somewhere out in that great

215

00:16:06,400 --> 00:16:01,310

unknown between Earth and Moon and

216

00:16:11,410 --> 00:16:06,410

retrieved the precious cargo information

217

00:16:19,290 --> 00:16:11,420

he had a panoramic view that to my

218

00:16:28,290 --> 00:16:21,460

Dave ow

219

00:16:32,850 --> 00:16:28,300

and Jim did a outstanding job of

220

00:16:39,730 --> 00:16:32,860

completing a very difficult mission and

221

00:16:46,680 --> 00:16:39,740

they have my sincere congratulations now

222

00:16:51,490 --> 00:16:46,690

let's take a look back in time by video

223

00:17:08,370 --> 00:16:51,500

with the crew of Apollo 15 and the

224

00:17:20,829 --> 00:17:14,829

fly me to the moon let me play among the

225

00:17:40,850 --> 00:17:20,839

stars let me see what spring is like on

226

00:17:53,660 --> 00:17:46,400

fill my heart with song and let me sing

227

00:17:58,220 --> 00:17:53,670

forevermore you are all I long for

228

00:18:32,299 --> 00:17:58,230

I worship and adore in other words

229

00:18:37,669 --> 00:18:35,659

my right hand a hammer and I'll drop the

230

00:18:47,869 --> 00:18:37,679

two up here and hopefully they'll hit

231

00:18:54,529 --> 00:18:51,979

my heart with song there's a simple

232

00:18:56,809 --> 00:18:54,539

plaque the 14 name and those are the

233

00:18:59,119 --> 00:18:56,819

names in alphabetical order of all the

234

00:19:17,190 --> 00:18:59,129

astronauts and cosmonauts who have died

235

00:19:17,200 --> 00:19:45,299

I worship he'll adore in other words

236

00:20:02,410 --> 00:19:55,840

you

237

00:20:05,360 --> 00:20:02,420

to be the lead flight director for

238

00:20:08,210 --> 00:20:05,370

Apollo 15 some people probably wonder

239

00:20:11,320 --> 00:20:08,220

what a lead flight director is well in

240

00:20:13,790 --> 00:20:11,330

Mission Control we had to work 24/7

241

00:20:16,940 --> 00:20:13,800

although that was not a term we used

242

00:20:19,250 --> 00:20:16,950

then and so we had three or four shifts

243

00:20:22,280 --> 00:20:19,260

we actually kind of went back and forth

244

00:20:24,950 --> 00:20:22,290

between using three and four each team

245

00:20:27,800 --> 00:20:24,960

was led by a flight director but one was

246

00:20:29,750 --> 00:20:27,810

designated as the lead worked with the

247

00:20:31,330 --> 00:20:29,760

crew worked with the program office made

248

00:20:37,240 --> 00:20:31,340

sure everything was ready for the flight

249

00:20:43,100 --> 00:20:37,250

I was about six feet one

250

00:20:48,740 --> 00:20:43,110

joe-joe about the same but Apollo 15

251  
00:20:52,460 --> 00:20:48,750  
beat us down we had a lot of fun with

252  
00:20:53,420 --> 00:20:52,470  
the flight it was and I'll be fast about

253  
00:20:57,470 --> 00:20:53,430  
this because we're running a little

254  
00:20:59,620 --> 00:20:57,480  
behind but there's there is a feeling

255  
00:21:03,590 --> 00:20:59,630  
some time about what it took to get us

256  
00:21:06,830 --> 00:21:03,600  
even to Apollo 15 and we stood on the

257  
00:21:11,270 --> 00:21:06,840  
shoulders of Mercury Gemini the first

258  
00:21:15,590 --> 00:21:11,280  
eight flights of Apollo just to get to

259  
00:21:18,710 --> 00:21:15,600  
the point that we could fly 15 and so it

260  
00:21:21,290 --> 00:21:18,720  
was a it was a team effort built up from

261  
00:21:25,790 --> 00:21:21,300  
from the beginning it wasn't a one-time

262  
00:21:28,610 --> 00:21:25,800  
occurrence we knew what we were doing we

263  
00:21:30,950 --> 00:21:28,620

were pretty cocky but we had pretty good

264

00:21:34,340 --> 00:21:30,960

reason to be or you we didn't know what

265

00:21:37,070 --> 00:21:34,350

we were doing and so I'm honored to be

266

00:21:39,320 --> 00:21:37,080

here to celebrate this one particularly

267

00:21:41,960 --> 00:21:39,330

Dave Dave and I over the years have

268

00:21:44,780 --> 00:21:41,970

remained very close we we've done a lot

269

00:21:46,310 --> 00:21:44,790

of things together and it's always nice

270

00:21:48,350 --> 00:21:46,320

to get the whole family back together

271

00:21:54,800 --> 00:21:48,360

though and that's what I feel like this

272

00:21:56,570 --> 00:21:54,810

is really family the Jay missions I

273

00:21:58,040 --> 00:21:56,580

wanted to say real quickly and you're

274

00:21:59,930 --> 00:21:58,050

gonna hear some more about this the Jay

275

00:22:02,120 --> 00:21:59,940

missions are what we call the last three

276

00:22:05,810 --> 00:22:02,130  
missions Jay just was a block of

277

00:22:08,919 --> 00:22:05,820  
spacecraft and as Neil and remind me

278

00:22:13,519 --> 00:22:08,929  
never to follow Neil again

279

00:22:14,120 --> 00:22:13,529  
that's a hard act to follow the Jay

280

00:22:17,090 --> 00:22:14,130  
missions

281

00:22:21,139 --> 00:22:17,100  
those last three spacecraft had had

282

00:22:24,139 --> 00:22:21,149  
their over they had more state time we

283

00:22:27,710 --> 00:22:24,149  
had the sembei that that al had to take

284

00:22:31,159 --> 00:22:27,720  
care of but we've really had a very very

285

00:22:32,659 --> 00:22:31,169  
capable team and I'm going to talk a

286

00:22:36,549 --> 00:22:32,669  
little bit at that when I get the crew

287

00:22:39,980 --> 00:22:36,559  
up here and it's now time to do that

288

00:22:44,600 --> 00:22:39,990

first of all I like to get commander

289

00:22:47,210 --> 00:22:44,610

Dave Scott in CMP no that other guy al

290

00:22:58,580 --> 00:22:47,220

worden get you to come up here and join

291

00:23:01,779 --> 00:22:58,590

me and probably another reason I'm not

292

00:23:06,649 --> 00:23:01,789

six feet one anymore the backup crew

293

00:23:08,299 --> 00:23:06,659

dick Gordon Vance brand and there's Jack

294

00:23:16,159 --> 00:23:08,309

Schmitt I couldn't even fight him on the

295

00:23:20,889 --> 00:23:16,169

road there we're missing one crewman if

296

00:23:26,139 --> 00:23:20,899

you'll note unfortunately Jim Irwin

297

00:23:31,149 --> 00:23:26,149

passed away in 1991 one heck of a pilot

298

00:23:33,110 --> 00:23:31,159

great guy to work with calm cool quiet

299

00:23:36,590 --> 00:23:33,120

reminds me a little bit of Neil

300

00:23:38,389 --> 00:23:36,600

Armstrong sometime didn't have a lot to

301  
00:23:42,430 --> 00:23:38,399  
say but when he said something you

302  
00:23:45,380 --> 00:23:42,440  
better listen because it was right and

303  
00:23:49,130 --> 00:23:45,390  
so Jim can't be with us tonight but we

304  
00:23:52,789 --> 00:23:49,140  
very happy to say that Mary is here with

305  
00:23:55,630 --> 00:23:52,799  
her family please stand up and where's

306  
00:24:12,280 --> 00:24:07,810  
stand up okay as I mentioned the Jay

307  
00:24:14,410 --> 00:24:12,290  
missions very much kind of the cream of

308  
00:24:18,070 --> 00:24:14,420  
the crop at the end of the program that

309  
00:24:20,770 --> 00:24:18,080  
we had been able to build on I think one

310  
00:24:22,690 --> 00:24:20,780  
of the the way I like to say it is that

311  
00:24:25,210 --> 00:24:22,700  
for the first several missions to the

312  
00:24:26,820 --> 00:24:25,220  
moon I know in the control center we

313  
00:24:29,080 --> 00:24:26,830

were worried about the transportation

314

00:24:31,600 --> 00:24:29,090

getting them up there getting them back

315

00:24:36,960 --> 00:24:31,610

and make sure we didn't leave anybody or

316

00:24:45,610 --> 00:24:40,510

something happened though between 14 and

317

00:24:49,930 --> 00:24:45,620

15 we actually ended up we were very

318

00:24:52,810 --> 00:24:49,940

fortunate that they've Scott and we also

319

00:24:57,190 --> 00:24:52,820

had on the backup crew Jack Schmitt very

320

00:25:04,720 --> 00:24:57,200

much interested in the science oh I

321

00:25:05,110 --> 00:25:04,730

forgot Joe well I know I'm sorry I'm

322

00:25:08,010 --> 00:25:05,120

sorry

323

00:25:12,340 --> 00:25:08,020

that babyface guy you saw up there

324

00:25:18,910 --> 00:25:12,350

JoEllen Joe come on up I'm sorry that's

325

00:25:21,520 --> 00:25:18,920

all right Joe Joe was the Capcom for all

326

00:25:24,480 --> 00:25:21,530

of the EVs he was also I noticed that

327

00:25:27,340 --> 00:25:24,490

went back in the transcript he was also

328

00:25:31,330 --> 00:25:27,350

up there he was on duty for a lot of

329

00:25:33,940 --> 00:25:31,340

other stuff in that flight but and Jerry

330

00:25:35,560 --> 00:25:33,950

and yeah Jerry I know why he did it

331

00:25:37,330 --> 00:25:35,570

because I always thought it that you

332

00:25:39,150 --> 00:25:37,340

were the lead flight director I didn't

333

00:25:46,110 --> 00:25:39,160

work

334

00:25:50,820 --> 00:25:46,120

okay got it well anyway back to

335

00:25:53,430 --> 00:25:50,830

something more serious and the Jay

336

00:25:55,350 --> 00:25:53,440

missions we had we had two guys that

337

00:25:57,410 --> 00:25:55,360

were really we had a scientist is a

338

00:26:00,840 --> 00:25:57,420

backup crewman but we had a commander

339

00:26:03,540 --> 00:26:00,850

that really understood that it was time

340

00:26:05,310 --> 00:26:03,550

to kind of shift I think kind of shift

341

00:26:07,770 --> 00:26:05,320

the mode that we've been operating it

342

00:26:10,980 --> 00:26:07,780

from that transportation focus to a

343

00:26:14,100 --> 00:26:10,990

science focus and Dave came to me and

344

00:26:16,830 --> 00:26:14,110

said do you want to go out on a field

345

00:26:19,620 --> 00:26:16,840

geology trip with us and see what we

346

00:26:21,870 --> 00:26:19,630

actually do to get ready for this and

347

00:26:25,200 --> 00:26:21,880

also understand a little more about the

348

00:26:27,360 --> 00:26:25,210

moon and I jumped at it I had and it

349

00:26:29,460 --> 00:26:27,370

turned out it started to trend that from

350

00:26:31,680 --> 00:26:29,470

then until the end of the program we had

351  
00:26:34,830 --> 00:26:31,690  
a lot of program management even from

352  
00:26:37,770 --> 00:26:34,840  
NASA headquarters that went out with

353  
00:26:39,300 --> 00:26:37,780  
these crews later on and studied what

354  
00:26:41,570 --> 00:26:39,310  
they were doing in really got focused on

355  
00:26:44,220 --> 00:26:41,580  
it so we've really had to focus on on

356  
00:26:46,860 --> 00:26:44,230  
science and that's why I wanted to get

357  
00:26:51,660 --> 00:26:46,870  
Dave first to talk about kind of what

358  
00:26:54,630 --> 00:26:51,670  
led you down that path and also your

359  
00:26:58,970 --> 00:26:54,640  
value what you think about the value of

360  
00:27:01,260 --> 00:26:58,980  
that training the field geology stuff

361  
00:27:05,310 --> 00:27:01,270  
like all of it there are a lot of pieces

362  
00:27:07,590 --> 00:27:05,320  
to this sort of thing I was I was lucky

363  
00:27:10,710 --> 00:27:07,600

and the cue I was lucky in the flights I

364

00:27:13,770 --> 00:27:10,720

got to fly and being able to get ready

365

00:27:16,350 --> 00:27:13,780

for 15 I'd flown

366

00:27:19,470 --> 00:27:16,360

jiminee eight more on that later Apollo

367

00:27:25,100 --> 00:27:19,480

nine and learned to command module I got

368

00:27:28,050 --> 00:27:25,110

ready for 15 and Jim Irwin was

369

00:27:29,880 --> 00:27:28,060

absolutely the expert in a lunar module

370

00:27:32,730 --> 00:27:29,890

I didn't have to learn much Jim was

371

00:27:34,380 --> 00:27:32,740

there al was so tuned into the command

372

00:27:37,370 --> 00:27:34,390

module didn't have to think about that

373

00:27:40,320 --> 00:27:37,380

so I had to find something to do I

374

00:27:43,830 --> 00:27:40,330

thought gee you know this rock stuff is

375

00:27:47,130 --> 00:27:43,840

pretty cool and so I was looking around

376

00:27:49,920 --> 00:27:47,140

we had these geology courses that pretty

377

00:27:52,259 --> 00:27:49,930

boring and finally Jack Schmitt came up

378

00:27:53,930 --> 00:27:52,269

and said hey I got the right instructor

379

00:27:57,389 --> 00:27:53,940

for you and I thought boy I sure hope so

380

00:28:00,089 --> 00:27:57,399

so all of a sudden shows up the silver

381

00:28:02,639 --> 00:28:00,099

from caltech who was absolutely the most

382

00:28:05,609 --> 00:28:02,649

brilliant professor I have ever had and

383

00:28:08,669 --> 00:28:05,619

he lit the fire he really lit the fire

384

00:28:11,459 --> 00:28:08,679

so I was lucky I got there at the right

385

00:28:15,359 --> 00:28:11,469

time I had a great professor and I had

386

00:28:17,759 --> 00:28:15,369

Jack as a tutor constantly so there was

387

00:28:20,279 --> 00:28:17,769

Jack there was Lee silver you know al

388

00:28:22,739 --> 00:28:20,289

had the command module handle Jim had a

389

00:28:25,199 --> 00:28:22,749

lunar module handled chute I had to I

390

00:28:27,479 --> 00:28:25,209

had the geology wired man how could I

391

00:28:30,930 --> 00:28:27,489

miss and that's where I really got to it

392

00:28:33,299 --> 00:28:30,940

yeah I bet you got more advice and stuff

393

00:28:37,139 --> 00:28:33,309

from Schmitt than you probably wanted to

394

00:28:38,719 --> 00:28:37,149

have but we'll let him filibuster on

395

00:28:46,409 --> 00:28:38,729

that in a minute

396

00:28:48,269 --> 00:28:46,419

being a former senator al is your first

397

00:28:50,119 --> 00:28:48,279

flight you went all the way to the moon

398

00:28:54,269 --> 00:28:50,129

did all that do you have any surprises

399

00:28:58,349 --> 00:28:54,279

any surprises that came up surprises on

400

00:29:03,869 --> 00:28:58,359

a flight yeah we had a few I guess

401  
00:29:06,539 --> 00:29:03,879  
nothing really heroic or catastrophic we

402  
00:29:09,329 --> 00:29:06,549  
had a water leak inside the command

403  
00:29:12,469 --> 00:29:09,339  
module one day now you might not think

404  
00:29:15,419 --> 00:29:12,479  
that a leaky faucet is a big deal

405  
00:29:18,060 --> 00:29:15,429  
because normally it just all drains down

406  
00:29:22,619 --> 00:29:18,070  
and it's gone however when you get in

407  
00:29:25,440 --> 00:29:22,629  
space a leaky faucet is kind of a

408  
00:29:27,329 --> 00:29:25,450  
problem because what you get is a ball

409  
00:29:28,560 --> 00:29:27,339  
of water on the end of the faucet that

410  
00:29:32,669 --> 00:29:28,570  
keeps getting bigger and bigger and

411  
00:29:34,079 --> 00:29:32,679  
bigger and if it breaks away and go

412  
00:29:38,099 --> 00:29:34,089  
behind the instrument panel and could

413  
00:29:40,019 --> 00:29:38,109

cause lots of electrical problems I am

414

00:29:44,389 --> 00:29:40,029

convinced that the solution to this

415

00:29:47,489 --> 00:29:44,399

problem is why we send people into space

416

00:29:49,139 --> 00:29:47,499

rather than robots because robots would

417

00:29:52,049 --> 00:29:49,149

never figure this out you'll never guess

418

00:29:54,930 --> 00:29:52,059

what the solution was well the solution

419

00:29:57,329 --> 00:29:54,940

was we got a towel and we wrapped it

420

00:30:00,539 --> 00:29:57,339

around that bubble of water and we

421

00:30:01,799 --> 00:30:00,549

absorbed it a very simple thing but a

422

00:30:02,909 --> 00:30:01,809

robot would never think about that

423

00:30:04,470 --> 00:30:02,919

anyway there

424

00:30:06,090 --> 00:30:04,480

a couple of other surprises that I

425

00:30:09,029 --> 00:30:06,100

probably should and I don't want

426  
00:30:10,739 --> 00:30:09,039  
to put my commander down but I thought

427  
00:30:14,580 --> 00:30:10,749  
maybe I should mention a couple of

428  
00:30:19,739 --> 00:30:14,590  
things one is when the first stage shut

429  
00:30:23,099 --> 00:30:19,749  
down during our launch Jim Irwin and I

430  
00:30:24,499 --> 00:30:23,109  
found ourselves flailing like crazy to

431  
00:30:26,669 --> 00:30:24,509  
stay away from the instrument panel

432  
00:30:29,159 --> 00:30:26,679  
because we're going from four and a half

433  
00:30:32,070 --> 00:30:29,169  
G's one way to maybe a half a G the

434  
00:30:34,529 --> 00:30:32,080  
other way that was a big surprise and I

435  
00:30:37,440 --> 00:30:34,539  
recall Jim and I both looking at Dave

436  
00:30:39,029 --> 00:30:37,450  
and saying hmm what about that and they

437  
00:30:44,669 --> 00:30:39,039  
said she guys I forgot to tell you about

438  
00:30:47,609 --> 00:30:44,679

that a couple of things like woke up the

439

00:30:49,859 --> 00:30:47,619

next morning after we got in space had

440

00:30:51,419 --> 00:30:49,869

the worst back ache of my life and Dave

441

00:30:53,489 --> 00:30:51,429

says gee guys have forgot to tell you

442

00:30:55,680 --> 00:30:53,499

about that so there's a couple of things

443

00:30:58,590 --> 00:30:55,690

like that no big deal you know we

444

00:31:00,629 --> 00:30:58,600

survived it it was fine but from the

445

00:31:04,560 --> 00:31:00,639

mechanical standpoint we only had two

446

00:31:06,210 --> 00:31:04,570

things that I can think of one was the

447

00:31:10,109 --> 00:31:06,220

water leak and the other was we had a

448

00:31:12,359 --> 00:31:10,119

short in one of the electrical lines to

449

00:31:14,489 --> 00:31:12,369

the service propulsion system engine

450

00:31:18,840 --> 00:31:14,499

that we had to work around and assorted

451  
00:31:19,470 --> 00:31:18,850  
things I can think of oh the glass of

452  
00:31:21,749 --> 00:31:19,480  
the lunar module

453  
00:31:25,229 --> 00:31:21,759  
yeah whatever Jim took care of that oh

454  
00:31:28,409 --> 00:31:25,239  
he did oh so that was that with duct

455  
00:31:30,629 --> 00:31:28,419  
tape actually had it was vacuum cleaner

456  
00:31:33,029 --> 00:31:30,639  
what if vacuum cleaner one of the panels

457  
00:31:35,159 --> 00:31:33,039  
on one of the instruments broke during

458  
00:31:37,710 --> 00:31:35,169  
launch and there were glass shards

459  
00:31:39,570 --> 00:31:37,720  
floating around Jim went into the lunar

460  
00:31:42,450 --> 00:31:39,580  
module to check it out the glass shards

461  
00:31:44,999 --> 00:31:42,460  
all over the place so that got handled

462  
00:31:46,979 --> 00:31:45,009  
by a quick call down to MCC get the

463  
00:31:49,109 --> 00:31:46,989

vacuum cleaner and suck it all up and we

464

00:31:50,999 --> 00:31:49,119

clean that dude up too we're not sure we

465

00:31:53,070 --> 00:31:51,009

got it all though are we I mean we never

466

00:31:54,599 --> 00:31:53,080

really were assured that everything was

467

00:31:56,310 --> 00:31:54,609

cleaned up probably now that was enough

468

00:32:01,049 --> 00:31:56,320

so that didn't cause any problem you

469

00:32:03,720 --> 00:32:01,059

know it was a very clean flight probably

470

00:32:05,009 --> 00:32:03,730

those kind of things happened on several

471

00:32:06,930 --> 00:32:05,019

of the flights but we had some really

472

00:32:08,849 --> 00:32:06,940

serious stuff that we had to deal with

473

00:32:11,159 --> 00:32:08,859

and 15 was one of those that we just

474

00:32:13,739 --> 00:32:11,169

kind of sailed through before I get too

475

00:32:16,920 --> 00:32:13,749

far from the science I want to jump over

476  
00:32:19,080 --> 00:32:16,930  
to Jack give us your recollection

477  
00:32:22,020 --> 00:32:19,090  
about all that has training engineers

478  
00:32:23,460 --> 00:32:22,030  
and fighter pilots and all that kind of

479  
00:32:27,090 --> 00:32:23,470  
thing trying to teach him to have

480  
00:32:28,710 --> 00:32:27,100  
science in flight directors one of the

481  
00:32:33,830 --> 00:32:28,720  
first things that I realized after

482  
00:32:38,730 --> 00:32:33,840  
joining the astronaut corps in 1965-66

483  
00:32:41,880 --> 00:32:38,740  
was that pilots are very much like

484  
00:32:44,600 --> 00:32:41,890  
geologists they're good observers and so

485  
00:32:47,240 --> 00:32:44,610  
I felt we had wrong meat to work with

486  
00:32:50,610 --> 00:32:47,250  
because that's all a good geologist

487  
00:32:52,320 --> 00:32:50,620  
pretends to be is a good observer what

488  
00:32:53,700 --> 00:32:52,330

we had to do was give him some feeling

489

00:32:55,590 --> 00:32:53,710

for why they were going to observe

490

00:32:58,560 --> 00:32:55,600

things on the moon that was a little

491

00:33:00,270 --> 00:32:58,570

more challenging but nevertheless with

492

00:33:02,550 --> 00:33:00,280

the help of people like Lee silver and

493

00:33:06,210 --> 00:33:02,560

dick Johns and others that I called in

494

00:33:07,790 --> 00:33:06,220

to the effort and and I particularly

495

00:33:11,520 --> 00:33:07,800

have to acknowledge Jim Lovells

496

00:33:12,540 --> 00:33:11,530

leadership because al Shepard told me

497

00:33:14,910 --> 00:33:12,550

that if you're gonna do that kind of

498

00:33:17,010 --> 00:33:14,920

training change the whole paradigm and

499

00:33:19,680 --> 00:33:17,020

bring it into the astronaut office you

500

00:33:22,650 --> 00:33:19,690

got to have somebody to lead and Jim

501  
00:33:24,000 --> 00:33:22,660  
Lovells and up next and so I went to Jim

502  
00:33:25,650 --> 00:33:24,010  
and I said Jim would you like to try

503  
00:33:28,290 --> 00:33:25,660  
this training program and he said sure

504  
00:33:30,420 --> 00:33:28,300  
why not and even though he didn't get to

505  
00:33:32,730 --> 00:33:30,430  
practice it on the moon he sort of led

506  
00:33:35,190 --> 00:33:32,740  
the effort to make it legitimate within

507  
00:33:38,100 --> 00:33:35,200  
the office very very important and at

508  
00:33:40,050 --> 00:33:38,110  
the same time people over in Mission

509  
00:33:44,280 --> 00:33:40,060  
Control I hate to give them credit for

510  
00:33:48,530 --> 00:33:44,290  
anything but yeah at the same time

511  
00:33:52,490 --> 00:33:48,540  
people over there Gene Kranz Jerry

512  
00:33:58,560 --> 00:33:56,490  
they they became interested early even

513  
00:34:01,350 --> 00:33:58,570

earlier than that in having a science

514

00:34:04,880 --> 00:34:01,360

support room and many of the same people

515

00:34:07,050 --> 00:34:04,890

that helped Dave out and Jim Irwin out

516

00:34:10,110 --> 00:34:07,060

were people that were going to be in

517

00:34:11,940 --> 00:34:10,120

that science support room and and I have

518

00:34:14,490 --> 00:34:11,950

to then bring in another name Gordon

519

00:34:17,340 --> 00:34:14,500

Swan many of you remember who worked

520

00:34:19,560 --> 00:34:17,350

with Gene Kranz and and others to create

521

00:34:21,840 --> 00:34:19,570

the science support room which has

522

00:34:24,330 --> 00:34:21,850

continued I guess to this day as an

523

00:34:27,030 --> 00:34:24,340

important part of the of the Mission

524

00:34:29,070 --> 00:34:27,040

Control operation and indeed participate

525

00:34:31,270 --> 00:34:29,080

even participated in the final Sims

526

00:34:33,919 --> 00:34:31,280

that you all had an

527

00:34:37,250 --> 00:34:33,929

we had on there on succeeding missions

528

00:34:39,980 --> 00:34:37,260

so when you're dealing with raw material

529

00:34:42,980 --> 00:34:39,990

like engineers and pilots who really are

530

00:34:45,950 --> 00:34:42,990

basically observers and and rapid

531

00:34:47,930 --> 00:34:45,960

thinkers and people who like to look at

532

00:34:50,030 --> 00:34:47,940

alternative of what geologists like to

533

00:34:52,970 --> 00:34:50,040

call multiple working hypotheses on how

534

00:34:55,369 --> 00:34:52,980

to solve problems I think it was a

535

00:34:58,220 --> 00:34:55,379

foregone conclusion that with these

536

00:34:59,599 --> 00:34:58,230

kinds of people carrying the torch for

537

00:35:01,970 --> 00:34:59,609

science that it was going to be very

538

00:35:04,070 --> 00:35:01,980

successful and indeed it was my science

539

00:35:06,200 --> 00:35:04,080

colleagues will tell you that the apollo

540

00:35:09,140 --> 00:35:06,210

suite of samples of apollo observations

541

00:35:11,839 --> 00:35:09,150

the images that were taken are really a

542

00:35:15,200 --> 00:35:11,849

remarkable reservoir of information

543

00:35:16,730 --> 00:35:15,210

about not on but about the early history

544

00:35:19,870 --> 00:35:16,740

of the moon in the early history of our

545

00:35:23,150 --> 00:35:19,880

earth and that and that continues today

546

00:35:25,070 --> 00:35:23,160

those those samples from apollo 15 and

547

00:35:27,829 --> 00:35:25,080

all the missions are still being worked

548

00:35:29,510 --> 00:35:27,839

on I don't know who's paying for it but

549

00:35:31,880 --> 00:35:29,520

there are dedicated people out there

550

00:35:34,640 --> 00:35:31,890

just learning all sorts of things all

551  
00:35:36,320 --> 00:35:34,650  
the time about the moon and ultimately

552  
00:35:39,230 --> 00:35:36,330  
about the earth by working on those

553  
00:35:43,460 --> 00:35:39,240  
samples so thanks guys okay thank you

554  
00:35:47,120 --> 00:35:43,470  
jack we mentioned it's been mentioned

555  
00:35:49,760 --> 00:35:47,130  
several times we had a lunar rover on

556  
00:35:52,280 --> 00:35:49,770  
this on this flight for the first time I

557  
00:35:53,900 --> 00:35:52,290  
wanted to get Dave maybe to say a little

558  
00:35:56,780 --> 00:35:53,910  
bit what the rover what did Hannah like

559  
00:35:59,480 --> 00:35:56,790  
and what it was like maybe get dicks

560  
00:36:02,510 --> 00:35:59,490  
I know dick must have trained as a

561  
00:36:05,390 --> 00:36:02,520  
backup and see if you correlated the

562  
00:36:07,940 --> 00:36:05,400  
what you did on the earth and then what

563  
00:36:10,160 --> 00:36:07,950

was it like what was comparatively like

564

00:36:12,920 --> 00:36:10,170

when you got it on the winter surface

565

00:36:15,770 --> 00:36:12,930

was it easier tougher harder well you

566

00:36:18,829 --> 00:36:15,780

know it's interesting in that there's

567

00:36:21,349 --> 00:36:18,839

really no comparison the rover was

568

00:36:23,839 --> 00:36:21,359

designed to operate in one-sixth G on a

569

00:36:26,690 --> 00:36:23,849

lunar surface and we can ever really

570

00:36:29,599 --> 00:36:26,700

simulate that on the earth they tried to

571

00:36:31,579 --> 00:36:29,609

simulate one-sixth G and the the

572

00:36:34,550 --> 00:36:31,589

centrifuge building on wires and that

573

00:36:36,680 --> 00:36:34,560

didn't work you could drive it across a

574

00:36:41,030 --> 00:36:36,690

trainer we had you could drive it across

575

00:36:42,920 --> 00:36:41,040

the earth 1g that wasn't the same and

576

00:36:46,040 --> 00:36:42,930

you really never got a chance

577

00:36:48,260 --> 00:36:46,050

to feel what it was like to drive it too

578

00:36:49,880 --> 00:36:48,270

you got to the moon but I gotta tell you

579

00:36:52,339 --> 00:36:49,890

that's one of the most brilliant pieces

580

00:36:55,099 --> 00:36:52,349

of engineering this country or the world

581

00:36:58,579 --> 00:36:55,109

has ever come up with it was absolutely

582

00:37:00,380 --> 00:36:58,589

spectacular the way it unfolded and I

583

00:37:02,599 --> 00:37:00,390

could go on for hours about that thing

584

00:37:05,599 --> 00:37:02,609

but it was a as a lot of you already

585

00:37:08,240 --> 00:37:05,609

know it's electrically powered car each

586

00:37:11,270 --> 00:37:08,250

wheel had its independent drive and we

587

00:37:13,970 --> 00:37:11,280

had front and rear steering on it so it

588

00:37:16,030 --> 00:37:13,980

could drive around rocks and boulders

589

00:37:18,319 --> 00:37:16,040

and craters and a lunar surface is

590

00:37:22,130 --> 00:37:18,329

absolutely irregular there's nothing

591

00:37:24,740 --> 00:37:22,140

level about it there are small rocks big

592

00:37:27,920 --> 00:37:24,750

rocks small craters big craters shadowed

593

00:37:30,609 --> 00:37:27,930

craters no craters it's really tough to

594

00:37:34,010 --> 00:37:30,619

drive it on the other hand it's very

595

00:37:36,859 --> 00:37:34,020

responsive and it's just a superb piece

596

00:37:39,589 --> 00:37:36,869

of machinery we went all of about 12

597

00:37:43,460 --> 00:37:39,599

miles an hour but that's really fast on

598

00:37:45,349 --> 00:37:43,470

a moon and the real challenge was poor

599

00:37:47,630 --> 00:37:45,359

old Jim sitting in the right seat you

600

00:37:49,370 --> 00:37:47,640

know when you're driving a car it's okay

601  
00:37:50,930 --> 00:37:49,380  
you can drive the car the person in the

602  
00:37:53,299 --> 00:37:50,940  
car not knowing where you're going

603  
00:37:56,390 --> 00:37:53,309  
has a tough time and hold Jim was

604  
00:37:57,980 --> 00:37:56,400  
hanging on for dear life but he said hey

605  
00:38:00,500 --> 00:37:57,990  
doesn't like a bucking bronco

606  
00:38:03,319 --> 00:38:00,510  
he said yeah it sure was anyway it was a

607  
00:38:06,890 --> 00:38:03,329  
brilliant piece of machinery it got us

608  
00:38:09,380 --> 00:38:06,900  
around we went about 26 kilometers three

609  
00:38:13,280 --> 00:38:09,390  
different sites and it provided the

610  
00:38:15,710 --> 00:38:13,290  
transport not only for Gemini but for

611  
00:38:18,170 --> 00:38:15,720  
extra geology tools and the rocks and

612  
00:38:20,960 --> 00:38:18,180  
that sort of things so it was a fabulous

613  
00:38:23,809 --> 00:38:20,970

machine and I wish dick it had a chance

614

00:38:26,270 --> 00:38:23,819

to drive it on 18 it was his turn it was

615

00:38:27,710 --> 00:38:26,280

his time to go and if somebody in this

616

00:38:33,529 --> 00:38:27,720

country will get around to it

617

00:38:42,999 --> 00:38:36,529

I could upend the 13th man to walk on

618

00:38:45,919 --> 00:38:43,009

the moon that's right a dick I know you

619

00:38:48,439 --> 00:38:45,929

as the backup commander went there a lot

620

00:38:52,309 --> 00:38:48,449

of the same stuff that that the prime

621

00:38:54,529 --> 00:38:52,319

crew did just tell us about that being

622

00:38:59,539 --> 00:38:54,539

our backup crewman for a lunar mission

623

00:39:02,389 --> 00:38:59,549

has to be a lot to do not nearly as much

624

00:39:07,729 --> 00:39:02,399

maybe is going don't have to do anything

625

00:39:11,899 --> 00:39:07,739

Dave and held it at all I just held

626

00:39:14,479 --> 00:39:11,909

their hands now and then Jerry excuse me

627

00:39:17,689 --> 00:39:14,489

just a minute Neil I want to add to your

628

00:39:21,620 --> 00:39:17,699

repertoire and sprinkle a little more

629

00:39:29,899 --> 00:39:21,630

salt water around 16 and 17 were

630

00:39:32,629 --> 00:39:29,909

commanded by naval aviators also I don't

631

00:39:34,819 --> 00:39:32,639

know I think Al and I worked very very

632

00:39:38,419 --> 00:39:34,829

closely with Jaylin I probably spent

633

00:39:41,059 --> 00:39:38,429

more time together than anybody else

634

00:39:45,409 --> 00:39:41,069

because I worked back him backed up him

635

00:39:48,559 --> 00:39:45,419

I get my eight through together train

636

00:39:53,089 --> 00:39:48,569

with him on Apollo 9 or 12 and back to

637

00:39:56,209 --> 00:39:53,099

Dave on on 15 that I think it's a big

638

00:39:59,059 --> 00:39:56,219

thing which L came to me in and said

639

00:40:01,279 --> 00:39:59,069

look what just being alone and being on

640

00:40:03,019 --> 00:40:01,289

the back side of the moon what kind of

641

00:40:06,889 --> 00:40:03,029

support do you think you're gonna have

642

00:40:10,129 --> 00:40:06,899

and i said L don't want a and get her

643

00:40:18,690 --> 00:40:10,139

remember what happens on the back side

644

00:40:24,999 --> 00:40:22,539

Communications yeah right you're out of

645

00:40:26,650 --> 00:40:25,009

sight of everybody right hey what are

646

00:40:29,140 --> 00:40:26,660

you living whatever happens back there

647

00:40:31,589 --> 00:40:29,150

right is that what your face back well

648

00:40:34,569 --> 00:40:31,599

you should know you were there before me

649

00:40:36,880 --> 00:40:34,579

that's all anything anything you called

650

00:40:46,930 --> 00:40:36,890

me dick you know I took everything you

651  
00:40:58,539 --> 00:40:46,940  
told me very seriously okay that's

652  
00:41:00,699 --> 00:40:58,549  
probably enough of that I've heard that

653  
00:41:02,949 --> 00:41:00,709  
for 40 years tell them about flight from

654  
00:41:05,940 --> 00:41:02,959  
El Paso look ease you never know what to

655  
00:41:09,519 --> 00:41:05,950  
do I think I'm losing control here so I

656  
00:41:12,219 --> 00:41:09,529  
know I want to change this you asked

657  
00:41:14,859 --> 00:41:12,229  
about a support group for the command

658  
00:41:17,890 --> 00:41:14,869  
module pilots and I think we really need

659  
00:41:19,289 --> 00:41:17,900  
to have one because there were 12 guys

660  
00:41:23,259 --> 00:41:19,299  
walked on the moon

661  
00:41:25,209 --> 00:41:23,269  
we call them moon walkers I wonder if

662  
00:41:30,099 --> 00:41:25,219  
that has anything to do with Michael

663  
00:41:32,019 --> 00:41:30,109

Jackson if there are only six of us that

664

00:41:35,199 --> 00:41:32,029

were by ourselves in the command module

665

00:41:36,819 --> 00:41:35,209

so we do need a support group there's no

666

00:41:44,489 --> 00:41:36,829

question there's no doubt about it

667

00:41:51,390 --> 00:41:49,539

we do need a little support okay we got

668

00:41:53,529 --> 00:41:51,400

down to the moon we'll come back to the

669

00:41:58,150 --> 00:41:53,539

advanced in a second but we got down to

670

00:41:59,920 --> 00:41:58,160

the moon and of course JoEllen was he

671

00:42:04,150 --> 00:41:59,930

was the voice during that whole period

672

00:42:06,999 --> 00:42:04,160

and I can remember and I was flight

673

00:42:10,059 --> 00:42:07,009

director for most of that and I can

674

00:42:13,809 --> 00:42:10,069

remember some fantastic shots at Hadley

675

00:42:19,839 --> 00:42:13,819

rail or the boggy Marsh or whoever you

676  
00:42:22,949 --> 00:42:19,849  
landed and Joe say something about the

677  
00:42:25,959 --> 00:42:22,959  
Evie ace they were pretty dynamic and

678  
00:42:27,999 --> 00:42:25,969  
some tremendous pictures were taken and

679  
00:42:30,620 --> 00:42:28,009  
actually with the rover we had

680  
00:42:33,049 --> 00:42:30,630  
essentially full-time television

681  
00:42:36,650 --> 00:42:33,059  
and it was pretty high death for its day

682  
00:42:38,599 --> 00:42:36,660  
it was very very clear we could see just

683  
00:42:41,180 --> 00:42:38,609  
if they position and we could actually

684  
00:42:44,839 --> 00:42:41,190  
control it on the ground too but we had

685  
00:42:46,099 --> 00:42:44,849  
some great great shots so Joe talked

686  
00:42:48,049 --> 00:42:46,109  
about the EVs

687  
00:42:50,509 --> 00:42:48,059  
Jerry Jerry thank you I really

688  
00:42:53,150 --> 00:42:50,519

appreciate this again I'm Joe Allen I'm

689

00:42:57,499 --> 00:42:53,160

at most a very small footnote in this

690

00:43:00,099 --> 00:42:57,509

cast of characters but I had I had a

691

00:43:05,120 --> 00:43:00,109

great fun as the capsule communicator

692

00:43:08,539 --> 00:43:05,130

during this time and Jim and Dave always

693

00:43:10,370 --> 00:43:08,549

and al you referred to me as Joe during

694

00:43:12,200 --> 00:43:10,380

that time I got several letters

695

00:43:14,450 --> 00:43:12,210

addressed to Joe United States of

696

00:43:16,370 --> 00:43:14,460

America then it came from all over the

697

00:43:20,120 --> 00:43:16,380

world and it came to me there was

698

00:43:21,769 --> 00:43:20,130

another letter that came and Jerry I'm

699

00:43:24,230 --> 00:43:21,779

not sure I've forgiven you for this yet

700

00:43:26,630 --> 00:43:24,240

you had it read I think during one of

701  
00:43:30,380 --> 00:43:26,640  
the nighttime shifts we were not on but

702  
00:43:36,170 --> 00:43:30,390  
it was read on the net to NASA public

703  
00:43:38,870 --> 00:43:36,180  
affairs and it read as follows hi my

704  
00:43:41,509 --> 00:43:38,880  
name is Michael I'm a 14 year old kid in

705  
00:43:44,359 --> 00:43:41,519  
Kansas I know I'm too young to be an

706  
00:43:49,970 --> 00:43:44,369  
astronaut but this job of Joe looks

707  
00:43:54,799 --> 00:43:49,980  
really easy and I would like to do it on

708  
00:44:00,289 --> 00:43:54,809  
Apollo 16 and 17 and everybody found

709  
00:44:03,230 --> 00:44:00,299  
that very amusing Jerry except me Neil

710  
00:44:07,099 --> 00:44:03,240  
thank you for your remarks I although I

711  
00:44:08,990 --> 00:44:07,109  
take a little issue with the title of

712  
00:44:11,240 --> 00:44:09,000  
the site you know you landed in this sea

713  
00:44:13,359 --> 00:44:11,250

of Trent tranquility and if memory

714

00:44:17,569 --> 00:44:13,369

serves there's a park in Houston

715

00:44:19,130 --> 00:44:17,579

tranquility park dedicated and at that

716

00:44:28,509 --> 00:44:19,140

time you observed it was lucky you

717

00:44:37,069 --> 00:44:31,819

now Jerry Eirik question to me the EPA's

718

00:44:38,599 --> 00:44:37,079

Navy A's they were extraordinary and we

719

00:44:42,410 --> 00:44:38,609

had very good communication we had very

720

00:44:47,150 --> 00:44:42,420

good TV coverage as Jerry recalls I also

721

00:44:49,249 --> 00:44:47,160

worked under Jerry's direction and

722

00:44:52,519 --> 00:44:49,259

tutelage and as I've done most of my

723

00:44:55,039 --> 00:44:52,529

life and Jerry it was great fun we had

724

00:44:57,499 --> 00:44:55,049

so enjoyed Dave working with you and

725

00:44:59,839 --> 00:44:57,509

your crew but I also enjoyed working

726

00:45:01,970 --> 00:44:59,849

with Gene Kranz and Jerry and others and

727

00:45:04,819 --> 00:45:01,980

I remember when you and Jim were

728

00:45:08,749 --> 00:45:04,829

wrestling with the drill stuck in the

729

00:45:11,359 --> 00:45:08,759

moon there were other glitches going on

730

00:45:13,039 --> 00:45:11,369

and Jerry turned to me and said Joe get

731

00:45:14,660 --> 00:45:13,049

the drill out of the moon I'll deal with

732

00:45:18,049 --> 00:45:14,670

the other glitches I don't know if you

733

00:45:21,049 --> 00:45:18,059

remember and you and Jim were able to

734

00:45:22,720 --> 00:45:21,059

get the drill out of the moon and I said

735

00:45:27,079 --> 00:45:22,730

thank goodness I don't let the air out

736

00:45:28,609 --> 00:45:27,089

but it didn't and the drill came up and

737

00:45:30,079 --> 00:45:28,619

it was the first course Thames that came

738

00:45:32,960 --> 00:45:30,089

back from the lunar surface that were

739

00:45:34,940 --> 00:45:32,970

really terrific and I think Jackie would

740

00:45:38,539 --> 00:45:34,950

know more about the science that came

741

00:45:42,529 --> 00:45:38,549

from that but the last thing that I'll

742

00:45:44,479 --> 00:45:42,539

mention is I had studied physics in

743

00:45:46,460 --> 00:45:44,489

Germany for a couple of years and there

744

00:45:48,650 --> 00:45:46,470

were a number of television stations

745

00:45:49,370 --> 00:45:48,660

from all over the world and at the end

746

00:45:51,440 --> 00:45:49,380

of my shift

747

00:45:55,789 --> 00:45:51,450

they had press conferences and I did an

748

00:45:57,859 --> 00:45:55,799

interview to Germany in in German to

749

00:45:59,029 --> 00:45:57,869

several television and radio stations

750

00:46:00,739 --> 00:45:59,039

there and at the end of it I said this

751

00:46:02,599 --> 00:46:00,749

is remarkable I've never made a call

752

00:46:05,019 --> 00:46:02,609

across the Atlantic Ocean before and

753

00:46:10,009 --> 00:46:05,029

they looked at me like I was crazy

754

00:46:15,019 --> 00:46:10,019

because I'd been talking to the moon for

755

00:46:17,210 --> 00:46:15,029

four hours and in a sense that puts that

756

00:46:20,390 --> 00:46:17,220

puts this mission in context of the

757

00:46:22,160 --> 00:46:20,400

technology that we had then it was so

758

00:46:25,670 --> 00:46:22,170

expensive to make a call across the

759

00:46:27,559 --> 00:46:25,680

Atlantic Ocean we we government workers

760

00:46:29,749 --> 00:46:27,569

couldn't afford to do it and yet we were

761

00:46:33,769 --> 00:46:29,759

talking back and forth to the moon what

762

00:46:36,620 --> 00:46:33,779

a time what an era and there will come a

763

00:46:37,070 --> 00:46:36,630

time when humans try to go back to the

764

00:46:40,120 --> 00:46:37,080

moon and there

765

00:46:47,780 --> 00:46:40,130

gonna discover how difficult it is it is

766

00:46:50,870 --> 00:46:47,790

you know go ahead Dave a little side

767

00:46:54,380 --> 00:46:50,880

story here part of our geology training

768

00:46:56,690 --> 00:46:54,390

actually was to get together in the crew

769

00:46:58,060 --> 00:46:56,700

quarters after dinner with geologists

770

00:47:01,310 --> 00:46:58,070

who would lecture and we talked about

771

00:47:03,080 --> 00:47:01,320

going to Hadley Marsh Hadley real what

772

00:47:05,900 --> 00:47:03,090

do we want to call it bloody things and

773

00:47:08,420 --> 00:47:05,910

and what was there and what we did and

774

00:47:11,360 --> 00:47:08,430

what we should do and we had the whole

775

00:47:15,020 --> 00:47:11,370

team there including Joe Joe was also

776

00:47:18,460 --> 00:47:15,030

our chief scientist for the crew and I

777

00:47:20,330 --> 00:47:18,470

gotta tell you Joe did a magnificent job

778

00:47:24,170 --> 00:47:20,340

communicating with us on the moon

779

00:47:28,100 --> 00:47:24,180

because sometimes Jim and I weren't

780

00:47:32,150 --> 00:47:28,110

exactly communicative but Joe smoothed

781

00:47:33,590 --> 00:47:32,160

it over with him but nevertheless one

782

00:47:36,290 --> 00:47:33,600

evening we're having this discussion

783

00:47:38,360 --> 00:47:36,300

with a geologists and you know we'd have

784

00:47:39,110 --> 00:47:38,370

a have a drink before dinner and have a

785

00:47:42,410 --> 00:47:39,120

nice dinner

786

00:47:44,330 --> 00:47:42,420

Lou our our chef and then we go into the

787

00:47:46,220 --> 00:47:44,340

conference room and have a geology

788

00:47:48,290 --> 00:47:46,230

lecture and talk about all sorts of

789

00:47:50,600 --> 00:47:48,300

things and one of the things we talked

790

00:47:53,810 --> 00:47:50,610

about was names of the craters because

791

00:47:55,880 --> 00:47:53,820

we had to cover so much area we had to

792

00:47:57,560 --> 00:47:55,890

have names rather than numbers but

793

00:47:59,840 --> 00:47:57,570

another thing we talked about towards

794

00:48:04,000 --> 00:47:59,850

the end of the training was what can we

795

00:48:08,450 --> 00:48:04,010

do on 15 that would be unique

796

00:48:12,110 --> 00:48:08,460

interesting educational and fun well

797

00:48:15,710 --> 00:48:12,120

probably the most Inc the most video the

798

00:48:18,260 --> 00:48:15,720

kids see about Apollo 15 these days is a

799

00:48:21,830 --> 00:48:18,270

hammer and the feather yep that was

800

00:48:22,520 --> 00:48:21,840

Joe's idea it was his idea to come up

801  
00:48:26,540 --> 00:48:22,530  
with it

802  
00:48:29,690 --> 00:48:26,550  
and say hey here is a lesson for the

803  
00:48:32,150 --> 00:48:29,700  
kids that you can do and Joe thanks a

804  
00:48:34,100 --> 00:48:32,160  
bunch I mean we got more mileage on that

805  
00:48:38,030 --> 00:48:34,110  
than anything we did believe it or not

806  
00:48:41,000 --> 00:48:38,040  
but that was Joe's idea great Jackie and

807  
00:48:44,720 --> 00:48:41,010  
one thing you just speaking of mileage

808  
00:48:47,660 --> 00:48:44,730  
Joe mentioned one thing my mentor in the

809  
00:48:50,110 --> 00:48:47,670  
US Geological Survey gene shoemaker that

810  
00:48:53,140 --> 00:48:50,120  
you all many of you have met

811  
00:48:57,490 --> 00:48:53,150  
in the late gene shoemaker used the term

812  
00:49:01,930 --> 00:48:57,500  
perspicacious for what he wanted people

813  
00:49:05,650 --> 00:49:01,940

on the moon to be and the Apollo 15 pair

814

00:49:09,370 --> 00:49:05,660

Dave and Jim were perspicacious enough

815

00:49:11,260 --> 00:49:09,380

to recognize on their Eevee a that

816

00:49:13,930 --> 00:49:11,270

something was very different in one

817

00:49:16,570 --> 00:49:13,940

location and they immediately

818

00:49:21,510 --> 00:49:16,580

photographed it and sampled it that

819

00:49:25,360 --> 00:49:21,520

sample sort of lay undiscovered almost

820

00:49:27,370 --> 00:49:25,370

until a gene and I found the orange soil

821

00:49:31,000 --> 00:49:27,380

on Apollo 17 and all of a sudden

822

00:49:34,870 --> 00:49:31,010

somebody remembered that Apollo 15 had

823

00:49:38,140 --> 00:49:34,880

sampled green soil and it turns out

824

00:49:41,260 --> 00:49:38,150

those two samples are probably the right

825

00:49:43,840 --> 00:49:41,270

now are the hottest items in the lunar

826  
00:49:46,450 --> 00:49:43,850  
sample community because within them

827  
00:49:49,840 --> 00:49:46,460  
they now have found the existence of

828  
00:49:52,180 --> 00:49:49,850  
water within the glass and and thanks

829  
00:49:54,730 --> 00:49:52,190  
guys you may not be aware of just how

830  
00:49:57,190 --> 00:49:54,740  
important but your sample was and and

831  
00:49:58,660 --> 00:49:57,200  
and it just shows you that the value of

832  
00:50:01,110 --> 00:49:58,670  
the kind of training and the value the

833  
00:50:05,350 --> 00:50:01,120  
kind of people that we sent to the moon

834  
00:50:09,340 --> 00:50:05,360  
L short I just want to make a very quick

835  
00:50:12,460 --> 00:50:09,350  
comment it's always been interesting to

836  
00:50:14,740 --> 00:50:12,470  
me that there are several dozen

837  
00:50:16,780 --> 00:50:14,750  
geologists training two guys to walk

838  
00:50:19,930 --> 00:50:16,790

around on about a one square mile

839

00:50:23,260 --> 00:50:19,940

surface area of the Moon and there's one

840

00:50:26,890 --> 00:50:23,270

guy who trained us for lunar geology

841

00:50:28,930 --> 00:50:26,900

where we covered 25% of the moon dick

842

00:50:30,460 --> 00:50:28,940

and I so I just always thought that was

843

00:50:32,500 --> 00:50:30,470

kind of interesting that they had all

844

00:50:38,380 --> 00:50:32,510

the help they had all the help they

845

00:50:42,910 --> 00:50:38,390

could use right and that could have used

846

00:50:46,930 --> 00:50:42,920

some more I want to say something about

847

00:50:48,940 --> 00:50:46,940

Joe I'm sure most of you know it after

848

00:50:53,470 --> 00:50:48,950

Apollo Joe went on to fly the shuttle

849

00:50:55,780 --> 00:50:53,480

twice and did some AV a work which was

850

00:50:58,510 --> 00:50:55,790

pretty fantastic I still think the shot

851  
00:50:59,980 --> 00:50:58,520  
of the view standing on the rail is that

852  
00:51:01,900 --> 00:50:59,990  
recall it was on the rail so I've got a

853  
00:51:03,130 --> 00:51:01,910  
foothold or something holding a

854  
00:51:05,950 --> 00:51:03,140  
satellite that

855  
00:51:09,610 --> 00:51:05,960  
had retrieved that was humongous and

856  
00:51:12,400 --> 00:51:09,620  
here's Joe hanging on to that thing and

857  
00:51:14,770 --> 00:51:12,410  
it was a great shot but anyway Joe did

858  
00:51:16,450 --> 00:51:14,780  
go on to Jerry that's when you and I

859  
00:51:17,730 --> 00:51:16,460  
were both six feet tall that's right

860  
00:51:20,500 --> 00:51:17,740  
that's right

861  
00:51:24,280 --> 00:51:20,510  
it's four that's four this curry got to

862  
00:51:29,380 --> 00:51:24,290  
us and kind of the segue into Vance

863  
00:51:33,340 --> 00:51:29,390

brand Vance was getting ready as a

864

00:51:34,900 --> 00:51:33,350

backup on 15 would have been on 18 and I

865

00:51:39,280 --> 00:51:34,910

want him to talk about that experience

866

00:51:41,890 --> 00:51:39,290

because he then did go fly ASDP he was

867

00:51:46,090 --> 00:51:41,900

command module pilot on a STP and he

868

00:51:49,270 --> 00:51:46,100

commanded three shuttle flights so we

869

00:51:51,910 --> 00:51:49,280

got a guy sitting almost right in the

870

00:51:53,170 --> 00:51:51,920

middle there that has flown in space a

871

00:51:55,960 --> 00:51:53,180

bunch Vance

872

00:51:58,120 --> 00:51:55,970

tell us about getting ready for for this

873

00:51:59,830 --> 00:51:58,130

mission and how that mate you might even

874

00:52:03,430 --> 00:51:59,840

make a segue to how that helped you on a

875

00:52:08,890 --> 00:52:03,440

STP if it did and then on end of the

876

00:52:13,060 --> 00:52:08,900

shuttle okay well first let me point out

877

00:52:15,910 --> 00:52:13,070

that we had four four rookies on the

878

00:52:20,710 --> 00:52:15,920

mission and we had two experienced guys

879

00:52:23,740 --> 00:52:20,720

and so these two leaders experienced

880

00:52:27,670 --> 00:52:23,750

guys who did a terrific job Dave and

881

00:52:33,790 --> 00:52:27,680

dick they had quite a burden dealing

882

00:52:36,430 --> 00:52:33,800

with four rookies i I was I guess what

883

00:52:39,130 --> 00:52:36,440

you'd call junior rookie because three

884

00:52:43,450 --> 00:52:39,140

of them were on prime crews and I was on

885

00:52:45,550 --> 00:52:43,460

a backup crew but I I really learned a

886

00:52:48,810 --> 00:52:45,560

lot out of that I learned the command

887

00:52:53,560 --> 00:52:48,820

module and the mission and by observing

888

00:52:56,950 --> 00:52:53,570

our two leaders learned quite a bit

889

00:52:59,320 --> 00:52:56,960

about leadership I don't know whatever

890

00:53:02,710 --> 00:52:59,330

applied it later but

891

00:53:05,680 --> 00:53:02,720

I learned a lot

892

00:53:07,630 --> 00:53:05,690

after ask Joe I guess because he and I

893

00:53:12,480 --> 00:53:07,640

flew on one of the shuttle missions

894

00:53:17,020 --> 00:53:12,490

together but the mission was just

895

00:53:21,010 --> 00:53:17,030

fascinating it was the best job you

896

00:53:24,460 --> 00:53:21,020

could have to be a prime Mora backup on

897

00:53:28,450 --> 00:53:24,470

that mission and so it

898

00:53:32,710 --> 00:53:28,460

I felt really got me ready for for later

899

00:53:36,760 --> 00:53:32,720

on and of course we've never Jack and

900

00:53:40,800 --> 00:53:36,770

I've never forgotten a good relationship

901  
00:53:43,150 --> 00:53:40,810  
with we had with our commander dick

902  
00:53:49,830 --> 00:53:43,160  
matter of fact we still call him the

903  
00:54:04,620 --> 00:53:54,570  
but anyway it was really great

904  
00:54:09,610 --> 00:54:04,630  
beneficial great we yes you may

905  
00:54:12,550 --> 00:54:09,620  
commander during this this will be my

906  
00:54:16,720 --> 00:54:12,560  
last one I'm sure but you know during

907  
00:54:18,730 --> 00:54:16,730  
the limb liftoff essence station lunar

908  
00:54:21,940 --> 00:54:18,740  
surface just as they lift it off there

909  
00:54:24,940 --> 00:54:21,950  
was just hellacious racket they came

910  
00:54:30,190 --> 00:54:24,950  
over the net somebody was playing some

911  
00:54:32,290 --> 00:54:30,200  
very very loud music and nobody could

912  
00:54:37,180 --> 00:54:32,300  
figure out where in the world it came

913  
00:54:40,840 --> 00:54:37,190

from and nobody could talk while this

914

00:54:42,970 --> 00:54:40,850

music was L this is my story just a mice

915

00:54:46,930 --> 00:54:42,980

going on here well listen and you'll

916

00:54:50,620 --> 00:54:46,940

learn something I don't think so deal

917

00:54:52,630 --> 00:54:50,630

with it anyway it went on for several

918

00:54:56,290 --> 00:54:52,640

minutes and nobody could talk to anybody

919

00:54:59,470 --> 00:54:56,300

I have a two-part question now what did

920

00:55:03,130 --> 00:54:59,480

what what yeah for you what what did

921

00:55:05,650 --> 00:55:03,140

Dave say to you after that when he got

922

00:55:08,260 --> 00:55:05,660

back in a command module the second part

923

00:55:12,980 --> 00:55:08,270

of the question is there was three Air

924

00:55:15,380 --> 00:55:12,990

Force guys I Dave and Jim superb

925

00:55:18,560 --> 00:55:15,390

force pilots but I would like to know

926

00:55:22,359 --> 00:55:18,570

the music that you played at liftoff why

927

00:55:25,430 --> 00:55:22,369

the hell did you select Anchors Away

928

00:55:30,220 --> 00:55:25,440

alright let me let me let me let me

929

00:55:32,690 --> 00:55:30,230

answer your second question first right

930

00:55:35,150 --> 00:55:32,700

David Jim had been on a lunar surface

931

00:55:38,720 --> 00:55:35,160

for three days driving a Jeep and

932

00:55:41,359 --> 00:55:38,730

walking that is not a normal job for an

933

00:55:44,150 --> 00:55:41,369

Air Force guy right Air Force people

934

00:55:47,120 --> 00:55:44,160

generally fly airplanes that are in the

935

00:55:49,190 --> 00:55:47,130

sky I thought it only appropriate to

936

00:55:50,660 --> 00:55:49,200

play the Air Force song as they're

937

00:55:53,930 --> 00:55:50,670

getting ready to come off service now I

938

00:55:56,150 --> 00:55:53,940

have to admit I play I thought I was

939

00:55:57,560 --> 00:55:56,160

playing into Mission Control but what I

940

00:55:59,630 --> 00:55:57,570

didn't know is that I think Mission

941

00:56:01,430 --> 00:55:59,640

Control had to switch up that

942

00:56:04,280 --> 00:56:01,440

retransmitted it back to the lunar

943

00:56:05,660 --> 00:56:04,290

module and they got it in their ear as

944

00:56:08,180 --> 00:56:05,670

they're getting ready to take off on the

945

00:56:11,030 --> 00:56:08,190

moon and I'm sorry I apologize one more

946

00:56:13,609 --> 00:56:11,040

time I know I apologized in orbit after

947

00:56:17,630 --> 00:56:13,619

you guys docked but I'll apologize one

948

00:56:19,099 --> 00:56:17,640

more time for Mission Control yeah he

949

00:56:26,810 --> 00:56:19,109

says we had a switch in the wrong

950

00:56:29,150 --> 00:56:26,820

position yeah okay we saw a thing they

951  
00:56:31,310 --> 00:56:29,160  
say something about the Fallen astronaut

952  
00:56:35,240 --> 00:56:31,320  
memorial just you know kind of had that

953  
00:56:39,410 --> 00:56:35,250  
all came about we saw the picture here

954  
00:56:41,960 --> 00:56:39,420  
in the video and we had these

955  
00:56:43,580 --> 00:56:41,970  
conversations about what do you do you

956  
00:56:45,310 --> 00:56:43,590  
know we trained geology we learn how to

957  
00:56:48,830 --> 00:56:45,320  
land on the moon lltv

958  
00:56:51,770 --> 00:56:48,840  
algae VA you know heavy duty training

959  
00:56:53,750 --> 00:56:51,780  
but we also took some time in evenings

960  
00:56:56,540 --> 00:56:53,760  
or at the beach house to talk about

961  
00:56:59,150 --> 00:56:56,550  
other parts of the life in the world and

962  
00:57:02,120 --> 00:56:59,160  
what you do and we were fortunate that

963  
00:57:04,580 --> 00:57:02,130

there were fourteen guys who put their

964

00:57:07,550 --> 00:57:04,590

lives down so that we could get to where

965

00:57:09,980 --> 00:57:07,560

we were and we decided one evening

966

00:57:12,530 --> 00:57:09,990

sometime I don't remember when but we

967

00:57:15,080 --> 00:57:12,540

thought we should recognize them and

968

00:57:18,020 --> 00:57:15,090

honor them for contributing all they had

969

00:57:20,330 --> 00:57:18,030

so we could get to where we were so we

970

00:57:22,670 --> 00:57:20,340

had this little plaque design the little

971

00:57:24,620 --> 00:57:22,680

model of a fallen astronaut and one of

972

00:57:27,230 --> 00:57:24,630

the last things I did on a moon

973

00:57:30,290 --> 00:57:27,240

fact Jim reminded me of it we're closing

974

00:57:33,230 --> 00:57:30,300

out had to put the rover back in the

975

00:57:35,660 --> 00:57:33,240

back so the TV could be pointed and you

976  
00:57:37,880 --> 00:57:35,670  
know one thing I liked about Jim people

977  
00:57:40,520 --> 00:57:37,890  
though Jim and I were we really were

978  
00:57:44,360 --> 00:57:40,530  
like brothers we had signals we had all

979  
00:57:46,340 --> 00:57:44,370  
sorts of intuitive signals about doing

980  
00:57:48,800 --> 00:57:46,350  
this or doing that and missing this and

981  
00:57:51,350 --> 00:57:48,810  
missing that or getting it done and Jim

982  
00:57:53,840 --> 00:57:51,360  
sort of did me this as we were closing

983  
00:57:55,520 --> 00:57:53,850  
out and pointed down at a pocket and I

984  
00:57:58,550 --> 00:57:55,530  
had to plaque in my pocket and I thought

985  
00:58:00,940 --> 00:57:58,560  
oh yep I better do that so I went out

986  
00:58:03,170 --> 00:58:00,950  
and I put the plaque out and a little

987  
00:58:05,210 --> 00:58:03,180  
miniature astronaut out there took a

988  
00:58:07,280 --> 00:58:05,220

couple pictures and I felt pretty good

989

00:58:10,460 --> 00:58:07,290

about that and so did Jim and so did al

990

00:58:12,620 --> 00:58:10,470

that we recognized some guys who had

991

00:58:16,130 --> 00:58:12,630

really on both sides of the Iron Curtain

992

00:58:19,130 --> 00:58:16,140

who had really contributed everything to

993

00:58:21,530 --> 00:58:19,140

get to where we were which was fortunate

994

00:58:24,560 --> 00:58:21,540

for us and we appreciated all that and

995

00:58:26,900 --> 00:58:24,570

wanted to leave something for them great

996

00:58:29,270 --> 00:58:26,910

it was a great deal I didn't know about

997

00:58:35,420 --> 00:58:29,280

it until he got back actually but now

998

00:58:38,000 --> 00:58:35,430

there were many coins it was that was

999

00:58:42,350 --> 00:58:38,010

fine I didn't need to know

1000

00:58:44,480 --> 00:58:42,360

Oh everything now let me one final thing

1001  
00:58:47,930 --> 00:58:44,490  
that I wanted to talk about the mission

1002  
00:58:51,350 --> 00:58:47,940  
itself and then I'm gonna let Dave have

1003  
00:58:55,850 --> 00:58:51,360  
some time here you noticed in the

1004  
00:58:59,750 --> 00:58:55,860  
picture that on when they landed one of

1005  
00:59:01,670 --> 00:58:59,760  
the shoots had collapsed and I went back

1006  
00:59:05,570 --> 00:59:01,680  
over that transcript before I came out

1007  
00:59:07,580 --> 00:59:05,580  
here and I want to ask you al to kind of

1008  
00:59:10,400 --> 00:59:07,590  
go through that sequence turns out we

1009  
00:59:13,220 --> 00:59:10,410  
only needed two shoots it was two shoots

1010  
00:59:15,410 --> 00:59:13,230  
for safe but describe it what you saw

1011  
00:59:19,550 --> 00:59:15,420  
when you saw and also what the landing

1012  
00:59:21,320 --> 00:59:19,560  
was like in terms of you know that's

1013  
00:59:23,720 --> 00:59:21,330

that that's kind of an interesting

1014

00:59:25,900 --> 00:59:23,730

question in light of some discussions

1015

00:59:28,280 --> 00:59:25,910

that we had this afternoon on the bus

1016

00:59:31,580 --> 00:59:28,290

because what we were told on the bus

1017

00:59:34,250 --> 00:59:31,590

today was that some of the analysis of

1018

00:59:37,970 --> 00:59:34,260

the problem of that shoot had to do with

1019

00:59:43,580 --> 00:59:37,980

a d-ring or something that came loose

1020

00:59:47,780 --> 00:59:43,590

and the risers let loose right and that

1021

00:59:49,340 --> 00:59:47,790

the other side of that story was that we

1022

00:59:51,410 --> 00:59:49,350

had perched the fuel lines of the

1023

00:59:53,720 --> 00:59:51,420

hypergolic sand they went up in the they

1024

00:59:55,790 --> 00:59:53,730

followed the rises up and they burned

1025

01:00:02,150 --> 00:59:55,800

big holes in the parachute

1026

01:00:05,480 --> 01:00:02,160

I am absolutely amazed at these guys who

1027

01:00:08,720 --> 01:00:05,490

make analyses of what happened on a

1028

01:00:10,849 --> 01:00:08,730

flight without asking me what I'm

1029

01:00:13,940 --> 01:00:10,859

sitting there in my seat looking out the

1030

01:00:14,599 --> 01:00:13,950

window and watching it happen he's

1031

01:00:17,330 --> 01:00:14,609

nobody

1032

01:00:20,090 --> 01:00:17,340

you said a word you saw three sheets

1033

01:00:22,280 --> 01:00:20,100

right I saw three shoots I saw holes

1034

01:00:24,710 --> 01:00:22,290

develop in one chute get bigger and

1035

01:00:28,030 --> 01:00:24,720

bigger and bigger this I never saw

1036

01:00:30,020 --> 01:00:28,040

a riser go bad there was no such thing I

1037

01:00:34,430 --> 01:00:30,030

saw the holes get bigger and bigger

1038

01:00:36,740 --> 01:00:34,440

bigger to shoot finally streamed we came

1039

01:00:38,420 --> 01:00:36,750

down on two shoots as we were as we were

1040

01:00:41,390 --> 01:00:38,430

getting down to the water

1041

01:00:43,790 --> 01:00:41,400

the second shoot was developing holes oh

1042

01:00:45,770 --> 01:00:43,800

no we lost all the shoots because when

1043

01:00:47,780 --> 01:00:45,780

they when they cut loose they they

1044

01:00:49,670 --> 01:00:47,790

stopped saying I never got it back but

1045

01:00:51,890 --> 01:00:49,680

we lost the one shoot and it was because

1046

01:00:55,310 --> 01:00:51,900

of the the fuel fuel purge on the way

1047

01:00:58,370 --> 01:00:55,320

down what was their landing like curious

1048

01:01:00,080 --> 01:00:58,380

was it hard how would I know yeah it's

1049

01:01:02,420 --> 01:01:00,090

all over before I even thought about it

1050

01:01:05,060 --> 01:01:02,430

they're all different and I might make a

1051  
01:01:07,730 --> 01:01:05,070  
point relative to what commander Gordon

1052  
01:01:10,609 --> 01:01:07,740  
has discussed this evening well you know

1053  
01:01:14,240 --> 01:01:10,619  
when the command module lands in the

1054  
01:01:17,980 --> 01:01:14,250  
water there are two stable positions and

1055  
01:01:20,990 --> 01:01:17,990  
it's floating one is with the apex up

1056  
01:01:24,050 --> 01:01:21,000  
which is called stable one and the

1057  
01:01:26,090 --> 01:01:24,060  
others who are the apex down which is

1058  
01:01:28,280 --> 01:01:26,100  
pointing down into the water which is

1059  
01:01:30,380 --> 01:01:28,290  
called stable two and there are some

1060  
01:01:33,220 --> 01:01:30,390  
balloons that you blow up to get it back

1061  
01:01:37,810 --> 01:01:33,230  
up well I would like to make the point

1062  
01:01:41,060 --> 01:01:37,820  
the Air Force crew stayed in stable one

1063  
01:01:44,810 --> 01:01:41,070

somewhere the naval crews ended up and

1064

01:01:46,790 --> 01:01:44,820

stable - they like stable - maybe guys

1065

01:01:48,860 --> 01:01:46,800

like stable - right I guess they like to

1066

01:01:52,860 --> 01:01:48,870

swim

1067

01:01:54,570 --> 01:01:52,870

twice as stable yeah well they're their

1068

01:01:56,790 --> 01:01:54,580

Navy guys they like to look out the

1069

01:01:59,640 --> 01:01:56,800

window into the water not into the air

1070

01:02:02,430 --> 01:01:59,650

right all right let me Joe

1071

01:02:06,120 --> 01:02:02,440

30 seconds any final point you want to

1072

01:02:09,120 --> 01:02:06,130

make no only that this is a great

1073

01:02:10,950 --> 01:02:09,130

celebration and I want to thank the

1074

01:02:12,870 --> 01:02:10,960

astronaut scholarship folks for

1075

01:02:19,730 --> 01:02:12,880

organizing it Joe

1076

01:02:24,330 --> 01:02:19,740

I just great to see al and jim and well

1077

01:02:26,420 --> 01:02:24,340

another it's just these kind of

1078

01:02:29,520 --> 01:02:26,430

gatherings bring us all together and

1079

01:02:31,200 --> 01:02:29,530

their Bay had a chance to talk with a

1080

01:02:33,510 --> 01:02:31,210

bunch of people who have been working

1081

01:02:36,270 --> 01:02:33,520

the shuttle for many years and if in a

1082

01:02:38,640 --> 01:02:36,280

couple who actually worked Apollo they

1083

01:02:40,980 --> 01:02:38,650

all seem to be younger than those of us

1084

01:02:43,260 --> 01:02:40,990

up here well hard to believe and it's

1085

01:02:45,120 --> 01:02:43,270

just been a wonderful occasion and I

1086

01:02:48,290 --> 01:02:45,130

joined Joe in thanking you all for

1087

01:02:51,210 --> 01:02:48,300

making it possible Vance

1088

01:02:55,950 --> 01:02:51,220

doesn't seem like 40 years went by real

1089

01:02:59,520 --> 01:02:55,960

fast one thing I would like to mention

1090

01:03:03,900 --> 01:02:59,530

is that you look around this place you

1091

01:03:07,230 --> 01:03:03,910

see the crawler the the Saturn five the

1092

01:03:12,540 --> 01:03:07,240

pad and everything you think back to the

1093

01:03:18,360 --> 01:03:12,550

leaders we had back then George Lowe we

1094

01:03:21,870 --> 01:03:18,370

had a lot of leaders in some of them

1095

01:03:26,160 --> 01:03:21,880

German some from in from England various

1096

01:03:30,120 --> 01:03:26,170

parts of the world but they were all big

1097

01:03:34,500 --> 01:03:30,130

thinkers and because of that big

1098

01:03:38,280 --> 01:03:34,510

thinking why our country and history

1099

01:03:40,950 --> 01:03:38,290

really benefited skill kids 500 years

1100

01:03:46,200 --> 01:03:40,960

from now we'll know the name Neil

1101

01:03:49,920 --> 01:03:46,210

Armstrong now I hope in the future we

1102

01:03:54,440 --> 01:03:49,930

can continue at some kind of a pace like

1103

01:03:56,670 --> 01:03:54,450

that takes those kind of leaders and I

1104

01:04:00,010 --> 01:03:56,680

think it's great what we've done the

1105

01:04:04,910 --> 01:04:00,020

last 50 years I just

1106

01:04:08,630 --> 01:04:04,920

hope that someday we can be proceeding

1107

01:04:10,030 --> 01:04:08,640

like that in the future I'm not so sure

1108

01:04:16,880 --> 01:04:10,040

we are yeah

1109

01:04:20,750 --> 01:04:16,890

dick dick Garriott there's a real

1110

01:04:23,740 --> 01:04:20,760

privilege for me to have worked with

1111

01:04:28,670 --> 01:04:23,750

Dave for so many trips around the horn

1112

01:04:31,010 --> 01:04:28,680

and al and jim they taught me a lot i

1113

01:04:33,800 --> 01:04:31,020

thought i knew everything and i learned

1114

01:04:36,680 --> 01:04:33,810

from them and i hardly knew anything but

1115

01:04:40,250 --> 01:04:36,690

by working with them they trained me

1116

01:04:45,620 --> 01:04:40,260

very well for my next flight on Apollo 7

1117

01:04:51,050 --> 01:04:45,630

Oh scuse me 18 and I thank you both very

1118

01:04:56,240 --> 01:04:51,060

much for that well I just quickly like

1119

01:04:58,180 --> 01:04:56,250

to say how honored and pleased and happy

1120

01:05:01,460 --> 01:04:58,190

I am that you're all here tonight

1121

01:05:06,350 --> 01:05:01,470

helping us celebrate something that

1122

01:05:08,540 --> 01:05:06,360

occurred 40 years ago that was maybe one

1123

01:05:10,940 --> 01:05:08,550

of the best things this country has ever

1124

01:05:13,640 --> 01:05:10,950

done we do not see that today we won't

1125

01:05:17,000 --> 01:05:13,650

see that for a while and I think it's

1126

01:05:19,250 --> 01:05:17,010

just wonderful that you are here to help

1127

01:05:22,130 --> 01:05:19,260

us celebrate the 40th anniversary of

1128

01:05:22,910 --> 01:05:22,140

Apollo 15 and I thank you all very very

1129

01:05:26,510 --> 01:05:22,920

much

1130

01:05:30,050 --> 01:05:26,520

thank you okay and we will leave the

1131

01:05:34,070 --> 01:05:30,060

final word to Dave Scott commander of

1132

01:05:40,220 --> 01:05:34,080

Apollo 15 well let me take a couple

1133

01:05:43,220 --> 01:05:40,230

minutes a lot of things struck me today

1134

01:05:46,460 --> 01:05:43,230

one of which was I keep hearing 40 years

1135

01:05:50,720 --> 01:05:46,470

40 years 40 years 40 years and a good

1136

01:05:54,920 --> 01:05:50,730

grief 40 years out 40 years younger than

1137

01:05:59,540 --> 01:05:54,930

I am Dave but it's rather remarkable but

1138

01:06:02,660 --> 01:05:59,550

we we took a little tour today and we

1139

01:06:04,340 --> 01:06:02,670

went out past the beach house because I

1140

01:06:07,370 --> 01:06:04,350

wanted my family to see the beach house

1141

01:06:10,490 --> 01:06:07,380

and few people realize that during

1142

01:06:14,030 --> 01:06:10,500

Apollo we'd spend two to three weeks a

1143

01:06:15,590 --> 01:06:14,040

month here our simulators were here

1144

01:06:17,510 --> 01:06:15,600

command module the lunar module

1145

01:06:19,760 --> 01:06:17,520

simulator the spacecraft went through

1146

01:06:22,220 --> 01:06:19,770

all sorts of altitude chamber tests a

1147

01:06:25,640 --> 01:06:22,230

lot of other tests to Rockpile the suits

1148

01:06:27,260 --> 01:06:25,650

we spent a lot of time here and we went

1149

01:06:30,740 --> 01:06:27,270

out to the beach house which was a

1150

01:06:33,320 --> 01:06:30,750

sanctuary a place we could go without

1151  
01:06:35,090 --> 01:06:33,330  
having anybody come up to us and because

1152  
01:06:37,370 --> 01:06:35,100  
of all the things going on we walked

1153  
01:06:39,260 --> 01:06:37,380  
down a hall and a guy would come up but

1154  
01:06:40,310 --> 01:06:39,270  
good intention to say you got a minute

1155  
01:06:44,330 --> 01:06:40,320  
you got a minute

1156  
01:06:46,490 --> 01:06:44,340  
could go out to the beach house and do

1157  
01:06:48,740 --> 01:06:46,500  
some thinking so I wanted people to see

1158  
01:06:52,670 --> 01:06:48,750  
that but on the way to the beach house

1159  
01:06:55,670 --> 01:06:52,680  
we went past pad 19 that's the gym and I

1160  
01:06:57,590 --> 01:06:55,680  
pad and that brought back some some old

1161  
01:07:00,650 --> 01:06:57,600  
memories for me

1162  
01:07:02,510 --> 01:07:00,660  
in fact I recalled that when Neil and I

1163  
01:07:07,280 --> 01:07:02,520

were down here getting ready for Gemini

1164

01:07:09,380 --> 01:07:07,290

8 early in 1966 we were here one weekend

1165

01:07:11,090 --> 01:07:09,390

and we thought well let's go look at the

1166

01:07:14,800 --> 01:07:11,100

Apollo stuff because they were just

1167

01:07:17,570 --> 01:07:14,810

building it and so we drove up to the

1168

01:07:20,780 --> 01:07:17,580

VAB was being built and the firing was

1169

01:07:23,960 --> 01:07:20,790

built being built and of course into the

1170

01:07:25,550 --> 01:07:23,970

block house on pad 19 they have

1171

01:07:28,430 --> 01:07:25,560

something like I don't know 20 25

1172

01:07:31,220 --> 01:07:28,440

consoles in this big bunker and we

1173

01:07:35,300 --> 01:07:31,230

walked into the firing room for Apollo

1174

01:07:37,520 --> 01:07:35,310

and there were 240 consoles in there and

1175

01:07:41,720 --> 01:07:37,530

I remember looking at Neil and I thought

1176

01:07:44,240 --> 01:07:41,730

no way there's no way this is going to

1177

01:07:46,190 --> 01:07:44,250

work and we went into the VAB which a

1178

01:07:49,010 --> 01:07:46,200

lot of you saw today and you look up at

1179

01:07:52,220 --> 01:07:49,020

that and you say it ain't gonna work it

1180

01:07:54,710 --> 01:07:52,230

is too big it is just too big and a

1181

01:07:58,240 --> 01:07:54,720

remarkable thing about it is it all

1182

01:08:01,820 --> 01:07:58,250

worked we never had a Saturn failure

1183

01:08:03,800 --> 01:08:01,830

almost every mission went on time with

1184

01:08:05,800 --> 01:08:03,810

the exception of Jim Lovells bad break

1185

01:08:08,750 --> 01:08:05,810

they brought him home and it worked

1186

01:08:12,830 --> 01:08:08,760

everything else work is absolutely

1187

01:08:15,230 --> 01:08:12,840

remarkable and it takes me back again to

1188

01:08:17,840 --> 01:08:15,240

my beginnings in this business when I

1189

01:08:20,690 --> 01:08:17,850

flew on Jim Andy 8 and we had this

1190

01:08:24,339 --> 01:08:20,700

problem which Neil got us out of the

1191

01:08:26,499 --> 01:08:24,349

problem and I'll always be grateful Neil

1192

01:08:29,379 --> 01:08:26,509

forgiving us both the second chance

1193

01:08:31,419 --> 01:08:29,389

because Neil got us out of the box and

1194

01:08:33,550 --> 01:08:31,429

we got back down and we both had a

1195

01:08:36,309 --> 01:08:33,560

second chance and for that I'll be ever

1196

01:08:45,339 --> 01:08:36,319

grateful you done good boss you done

1197

01:08:47,260 --> 01:08:45,349

good and and then we get to 15 and I get

1198

01:08:49,510 --> 01:08:47,270

the two best guys in the world

1199

01:08:51,729 --> 01:08:49,520

chairwoman bless his heart I loved him

1200

01:08:54,550 --> 01:08:51,739

he was the best partner you could have

1201

01:08:57,220 --> 01:08:54,560

on a moon gym kept me squared away and

1202

01:08:58,859 --> 01:08:57,230

he always did it it was sort of like hey

1203

01:09:01,539 --> 01:08:58,869

Dave don't you think we ought to do this

1204

01:09:04,209 --> 01:09:01,549

which meant you're screwing up fix it

1205

01:09:06,970 --> 01:09:04,219

you know but he was a wonderful guy

1206

01:09:08,800 --> 01:09:06,980

and I really really enjoyed my

1207

01:09:12,220 --> 01:09:08,810

relationship with Jim we had a great

1208

01:09:14,289 --> 01:09:12,230

time and we had al to take care of the

1209

01:09:16,660 --> 01:09:14,299

command module and you know he pointed

1210

01:09:18,999 --> 01:09:16,670

out we're on a surface for three days

1211

01:09:22,450 --> 01:09:19,009

and he was alone for three days and he

1212

01:09:25,689 --> 01:09:22,460

had to be there when we got back he had

1213

01:09:28,629 --> 01:09:25,699

to do a big maneuver to change planes so

1214

01:09:31,120 --> 01:09:28,639

we could catch E and there he was all by

1215

01:09:33,370 --> 01:09:31,130

himself I never worried one minute I was

1216

01:09:37,410 --> 01:09:33,380

never concerned for one second I knew I

1217

01:09:43,689 --> 01:09:37,420

would be there so thanks he got us back

1218

01:09:46,539 --> 01:09:43,699

and then and a final thing that struck

1219

01:09:49,599 --> 01:09:46,549

me today we had this nice champagne

1220

01:09:51,160 --> 01:09:49,609

reception and and Lynn you put a great

1221

01:09:53,649 --> 01:09:51,170

show together for us thank you

1222

01:09:56,109 --> 01:09:53,659

and the introduction and I was standing

1223

01:09:58,870 --> 01:09:56,119

there looking you know I remember it

1224

01:10:01,419 --> 01:09:58,880

when I was a little kid and we used to

1225

01:10:03,069 --> 01:10:01,429

choose up sides to play game baseball or

1226

01:10:05,050 --> 01:10:03,079

basketball or something you know I

1227

01:10:06,700 --> 01:10:05,060

always wanted to get on his side with

1228

01:10:08,919 --> 01:10:06,710

the big guys you know the guys are

1229

01:10:11,830 --> 01:10:08,929

really good guys and I watched those

1230

01:10:14,260 --> 01:10:11,840

guys go back on that on the film today

1231

01:10:17,290 --> 01:10:14,270

at the champagne reception do you know

1232

01:10:20,050 --> 01:10:17,300

what those were the big guys that was a

1233

01:10:23,319 --> 01:10:20,060

a squad those were the franchise players

1234

01:10:25,780 --> 01:10:23,329

that was the first team and I'm proud to

1235

01:10:27,640 --> 01:10:25,790

have been included in that team and I

1236

01:10:29,799 --> 01:10:27,650

thank you guys all of you you're

1237

01:10:37,510 --> 01:10:29,809

terrific

1238

01:10:41,410 --> 01:10:37,520

great well that does it I just want to

1239

01:10:45,879 --> 01:10:41,420

say I this has been a big honor to be

1240

01:10:49,390 --> 01:10:45,889

here kind of like going back to what

1241

01:10:52,209 --> 01:10:49,400

Dave did with getting the ground people

1242

01:10:57,100 --> 01:10:52,219

involved in the in the geology training

1243

01:11:00,490 --> 01:10:57,110

along with Jack being included is super

1244

01:11:02,529 --> 01:11:00,500

it is a great honor and particularly to

1245

01:11:04,720 --> 01:11:02,539

share this with people that have not

1246

01:11:09,339 --> 01:11:04,730

lived in this environment all the time

1247

01:11:12,760 --> 01:11:09,349

is especially fun to do so all of you

1248

01:11:15,729 --> 01:11:12,770

that that have come from a long way of

1249

01:11:17,709 --> 01:11:15,739

way some of you and enjoyed I know of so

1250

01:11:21,399 --> 01:11:17,719

far I think it's time to go get some

1251

01:11:24,640 --> 01:11:21,409

dessert and I want to thank the panel

1252

01:11:26,439 --> 01:11:24,650

except I sure feel sorry that I left Joe

1253

01:11:27,689 --> 01:11:26,449

out I don't think I'll never hear the

1254

01:11:29,649 --> 01:11:27,699

end of this one

1255

01:11:37,600 --> 01:11:29,659

so with that I'm going to turn it back

1256

01:11:40,000 --> 01:11:37,610

to Charlie bad guys like wait hold it we

1257

01:11:45,209 --> 01:11:40,010

want to get a photograph so hold you

1258

01:11:50,520 --> 01:11:45,219

places and where's our photographer okay

1259

01:11:53,080 --> 01:11:50,530

so look at the different boat that

1260

01:12:07,729 --> 01:11:53,090

photographers what do you want where do

1261

01:12:07,739 --> 01:12:34,940

I won in this okay okay

1262

01:12:39,950 --> 01:12:37,760

thanks guys we appreciate it little

1263

01:12:42,620 --> 01:12:39,960

right evening we're gonna have dessert

1264

01:12:48,790 --> 01:12:42,630

inside and coffee

1265

01:12:56,420 --> 01:12:52,150

okay and we still the option is still

1266

01:13:01,520 --> 01:12:56,430

open so please bid and bid high and you

1267

01:13:03,920 --> 01:13:01,530

got till 10:40 to get your bids in so

1268

01:13:06,440 --> 01:13:03,930

thanks to God for everybody Jerry and

1269

01:13:07,160 --> 01:13:06,450

everybody for causing this it was a