1
00:00:10,009 --> 00:00:07,519
since explorer won the first u.s.

2
00:00:12,410 --> 00:00:10,019
satellite the Jet Propulsion lab has

3
00:00:15,799 --> 00:00:12,420
been a pioneer in America's space age

4
00:00:18,170 --> 00:00:15,809
its robotic spacecraft and Rovers have

5
00:00:20,720 --> 00:00:18,180
explored the solar system from Mercury

6
00:00:24,380 --> 00:00:20,730
to Neptune and looked out into the

7
00:00:26,570 --> 00:00:24,390
universe beyond anything seen before the

8
00:00:29,029 --> 00:00:26,580
beginnings of JPL can be found right on

9
00:00:31,999 --> 00:00:29,039
its doorstep just north of the Pasadena

10
00:00:35,720 --> 00:00:32,009
Rose Bowl and this dry riverbed called

11
00:00:39,709 --> 00:00:35,730
the Arroyo Seco turn back time seventy

12
00:00:41,420 --> 00:00:39,719
years to Halloween 1936 that's when a

13
00:00:44,869 --> 00:00:41,430

group from Caltech and their friends

14
00:00:46,520 --> 00:00:44,879
came out here to test an idea a tiny

15
00:00:53,529 --> 00:00:46,530
rocket motor that would eventually

16
00:00:58,790 --> 00:00:56,930
they were an odd mix Cal Tech student

17
00:01:00,939 --> 00:00:58,800
Frank Molina who later became the first

18
00:01:04,039 --> 00:01:00,949
director of JPL was interested in

19
00:01:06,469 --> 00:01:04,049
aerodynamics Jack Parsons was a chemist

20
00:01:09,410 --> 00:01:06,479
his buddy ed Foreman was a talented

21
00:01:12,679 --> 00:01:09,420
machinist Rudolph shod and caltex Apollo

22
00:01:15,800 --> 00:01:12,689
Smith also helped as Molina described in

23
00:01:18,469 --> 00:01:15,810
his 1968 interview the first test was

24
00:01:20,690 --> 00:01:18,479
made on the thirty-first of October 1936

25
00:01:22,130 --> 00:01:20,700
we had no money except on [\h__\h] money

26
00:01:24,920 --> 00:01:22,140
so we went around looking for secondhand

27
00:01:27,020 --> 00:01:24,930
stuff all over the area the group had

28
00:01:29,240 --> 00:01:27,030
the backing of Fame professor theodore

29
00:01:31,520 --> 00:01:29,250
von karman enough shall text Guggenheim

30
00:01:33,649 --> 00:01:31,530
aeronautical laboratory but most

31
00:01:36,649 --> 00:01:33,659
everyone else scoffed at rocketeers

32
00:01:39,649 --> 00:01:36,659
people associated rockets in these days

33
00:01:41,929 --> 00:01:39,659
with what we would consider bad science

34
00:01:45,230 --> 00:01:41,939
fiction films now they tried three times

35
00:01:47,330 --> 00:01:45,240
to fire the thing and the fuse they were

36
00:01:49,760 --> 00:01:47,340
using to split powder fuse just kept

37
00:01:51,230 --> 00:01:49,770
blowing out so nothing happens on the

38
00:01:53,179 --> 00:01:51,240

fourth try they ignited the motor and

39
00:01:54,590 --> 00:01:53,189
the oxygen line came off with around

40
00:01:57,590 --> 00:01:54,600
started shooting fire and they all ran

41
00:01:59,690 --> 00:01:57,600
away first day was a bust but in this

42
00:02:02,179 --> 00:01:59,700
letter to his parents in Texas Molina

43
00:02:03,889 --> 00:02:02,189
called it a success he considered it to

44
00:02:05,920 --> 00:02:03,899
success anyways to be because they

45
00:02:09,109 --> 00:02:05,930
learned a number of things not to do

46
00:02:11,100 --> 00:02:09,119
tests in November 1936 proved to be

47
00:02:14,970 --> 00:02:11,110
little better except for half

48
00:02:16,890 --> 00:02:14,980
produce this now classic photo Molina

49
00:02:19,320 --> 00:02:16,900
believe rockets could be the ticket to

50
00:02:21,690 --> 00:02:19,330
the high altitudes he needed for science

51
00:02:23,400 --> 00:02:21,700
research no one knew how to build a

52
00:02:26,700 --> 00:02:23,410
rocket more either liquid or solid

53
00:02:29,190 --> 00:02:26,710
really that was very effective very

54
00:02:32,310 --> 00:02:29,200
satisfactory so it meant that actually

55
00:02:34,550 --> 00:02:32,320
the people that the other was here but

56
00:02:40,020 --> 00:02:34,560
really thrown upon our own resources

57
00:02:41,820 --> 00:02:40,030
finally on January sixteenth 1937 6x the

58
00:02:45,390 --> 00:02:41,830
white smoke you're seeing coming up is

59
00:02:49,260 --> 00:02:45,400
the motor running the work of the group

60
00:02:51,780 --> 00:02:49,270
over these years put rocket propulsion

61
00:02:54,449 --> 00:02:51,790
raucous blight on our real sound

62
00:02:57,060 --> 00:02:54,459
scientific or technical basis from those

63
00:03:01,229 --> 00:02:57,070

early days in the Arroyo to the military

64
00:03:03,780 --> 00:03:01,239
work to space exploration the wild

65
00:03:06,060 --> 00:03:03,790
experiments 70 years ago set the tone

66
00:03:08,790 --> 00:03:06,070
for the Jet Propulsion Laboratory as a