The Moon By June

By William Vietinghoff

Shooting script for a science-fiction movie depicting the development of a fifty-one chambered rocket engine.*

No one to be seated during the last five minutes of the picture.

Photographed in color in GSAPscope using the new Hermaphroditic lens.

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EXT. SANTA SUSANA MOUNTAIN RANGE. DAY

The first scene to appear as the picture opens is the wide panorama of the Santa Susana mountains in the morning November sun. The camera moves in slowly. As the rocky landscape is approached, a winding road makes its appearance. Along its intricate mosaic of Goode and Schroeder road patches moves a bug-like procession of automobiles following a large white LOX TRUCK. *The camera passes the automobiles and fixes its attention on a lonely manzanita bush growing from a cleft in a boulder. At this point the melancholy notes of a guitar are heard and the voice of Frankie Laine bursts forth with the first stanza of the picture's theme:*

"Oh, that big test stand in the sky,
That big test stand in the sky,
Where the engines never run rough,
And the tanks never run dry . . . "

Now a rocket fires across the screen. Its flaming exhaust (with the Mach diamonds painted out) spells out the title of the picture:

T H E
M O O N
B Y
J U N E

*The picture they said couldn't be made.

INT. ENGINEERING BUILDING. DAY

The location is switched to the interior of a building located in the mountains shown in the opening. The place is filled with desks. In order that the audience will know right away what the men at the desks are supposed to be doing the camera shows a close-up of an overhead sign in green and white letters that read:

DEVELOPMENT

At a desk beneath the sign an engineer is seen to look up thoughtfully. He speaks.

JOHN COSTELLO: You know, now that Operations has taken over acceptance testing completely, there hasn't been much for us to do. I'll bet the wheels have got their heads together in Canoga right now. I've got a feeling we'll be getting word pretty soon of a re-shuffle.

FRANK LEADER (*looking up from a diagram of a home sprinkler system*): I know what you mean, John. I've been hearing rumors.

CUT TO ANOTHER PART OF THE ENGINEERING BUILDING

A pair of woman's hands are seen slipping a piece of yellow paper labeled AVOID VERBAL ORDERS *into an 8 ½ x 11 envelope. A rubber stamp is picked up, tapped on a pad and brought down on the envelope three times on each side, each time leaving the bold word* CONFIDENTIAL. *The flap is turned down and the camera follows the hands over to a stapler. The envelope flap is placed in the stapler and a fist is seen giving the rubber-covered knob several hard slams. The envelope is removed and the camera shows no staples have been left in the envelope. The camera observes the hands fumbling with the slide that retains the staples, pulling it out. The stapler is empty. The hands next move to a desk drawer and remove a roll of Scotch Tape. The hands are seen to undergo considerable difficulty because the tape has slipped from the serrated edge of the tape dispenser and is firmly stuck on the roll. The hands, shaking badly now, drop the Scotch Tape to pick up a grease pencil and with it scratch out all of the six* CONFIDENTIAL*s. The hands flip the unsealed envelope in the letter file labeled:* OUTGOING.

A calendar pad is now seen. The pages, each bearing a date, are seen to fall away, one by one, from the pad. The manzanita bush seen earlier in the opening bends before the wind.

The leaves flutter and tear away. More calendar pad leaves are seen to blow away as if in the wind. More manzanita leaves are seen to blow off in the wind, each bearing a date of the month. A man from the maintenance department drags a large carton labeled* TOWELSAVER *into which he sweeps old calendar pad sheets and manzanita leaves.*

CUT TO ANOTHER PART OF THE ENGINEERING BUILDING

The scene opens to show a mail girl pushing a wire basket cart with a square rear wheel bearing a large enameled name plate PIGGLY-WIGGLY. *She removes a well-worn 8 X 11 envelope and places it on the desk of one of the engineers. It is the same envelope seen in the earlier scene.*

BILL VIETINGHOFF: Well, what do we have here? A dispatch from Reuters? (*The lone AVO slides out of the envelope*). Apparently everyone is to read it. There's a long distribution list attached.

STAND ANALYST: What's it about?

VIETINGHOFF: Here, John, you start it around since your name's at the top.

COSTELLO: Don't give it to me, I want to get it last. I file them. Give it to Ed Farber. (*Vietinghoff walks over to Farber and throws it under his nose*).

FARBER: I saw that one. Give it to someone else.

STAND ANALYST: What's the AVO about?

COSTELLO: How do you know you've seen it, Ed?

FARBER: I recognize the coffee stain in the corner. It's about new time charges.

WALT GREENAWALD: It can't be that one. That one had a drawing of a time card on it. I remember it because it was a very poor drawing and you couldn't tell which column was which.

STAND ANALYST: Am I on the distribution?

FARBER: Who invented this AVO business anyway?

LEADER: The Hammermill Paper Company. What's it to you?

*(?)

STAND ANALYST: What do ya say we read that old AVO?

FARBER: I think I'll wait and see the movie.

Everyone falls back in his swivel chair laughing boisterously.

COSTELLO (*aside to Leader*): I'm worried about Ed. He's been very indifferent lately. He hasn't taken much interest in his work.

STAND ANALYST (*picking up AVO and reading aloud*): It says the company has acquired a new contract to design, develop and produce a multi-chambered rocket engine and airframe capable of taking a manned vehicle to the moon. It also states a reorganization is scheduled with the ultimate objective of forming a new unit to handle the various phases of development through production.

LEADER: Thank God! I was too far behind in my work anyway. A good reorganization will help me slip out from under.

FARBER: You guys do what you like. I've got no interest in this.

COSTELLO (*aside to Leader*): I'm worried about Farber.

A QUICK SERIES OF SHOTS

To indicate progress, various random film clips in rapid succession show men at drafting boards intently filling sheets of vellum with lines; secretaries are seen loading each other's arms with boxes of stationery; rows of solemn faced data reduction clerks industriously finger elaborate calculating machines; printed papers fall one by one on engineer's desks. Frank Leader studiously checks a secretary's typed work, nodding approval. A multitude of hands are seen dialing, answering, and hanging up telephones. One of these hands is seen to belong to WALT GREENAWALD *who resolutely picks up a telephone receiver. The camera moves in for an intimate close-up of the determined lines in his face as he speaks. There is a long whisker on his chin his razor missed.*

GREENAWALD: Hello, Sam? How are the odds running on Tony Zachary for supervisor? I'll have this week's pool sheets down by this afternoon. I've had the computers working on the tallies all day. I had no trouble getting the Ditto masters ready, but they almost held me up in reproduction because of the progress reports. I got a priority though. Keep me posted on meetings. They had one, eh? (*aside to Vietinghoff*) Sam mentions the project engineer was seen walking into the section chief's office. (*To Sam*) Very good there, Dad. That's the kind of info we're listening for. (*Hangs up*).

CUT TO CIGARETTE MACHINE

Two engineers are seen standing by the cigarette machine reaching in for matches. One speaks.

1ST ENGINEER: What's new in the big move?

2ND ENGINEER: Any time now the whole thing should let go. I hear the program engineer went into the personnel office.

CUT TO SMALL TABLE IN BREAK ROOM

Three women computers are seen at lunch playing poker with a pinochle deck. Each is eating cottage cheese.

1ST COMPUTER (*waving cards at third*): Since when have you been eating cottage cheese with pineapple instead of plain?

3RD COMPUTER: I don't feel I have to watch my diet.

2ND COMPUTER: That's good. You're lucky. Have you heard who our new boss might be?

3RD COMPUTER: I hear the project engineer went into the program office this morning. (a*ll three girls nod knowingly and study their hands.*)

CUT TO SIDE OF ENGINEERING BAY

Three engineers are seen flipping dimes in front of a coffee machine.

1ST ENGINEER (*smirking*): Well, it's all over but the shouting. Three supervisors were called into the program office this afternoon.

CLOSE SHOT

A secretary is whispering to co-worker by file.

SECRETARY: I'm sure the whole reorganization is settled. The program engineer and the project engineer were seen entering the men's room at 2:00 o'clock.

INT. HALLWAY. DAY

A group of approximately fifty people comprised of secretaries, computers and engineers have been notified of their assignment to the Moon Rocket Project. A meeting has been called of all participating personnel FRANK LEADER *and* JOHN COSTELLO *are seen*

walking down a long corridor toward a large conference room filled with seated men and women. They stop at the doorway and greet each other.

FRANK LEADER: Well, John, I see you got your AVO too.

JOHN COSTELLO: That's right. I understand everyone here has been notified they are assigned to the new Moon Project. The new supervisor is going to be announced.

LEADER: Let's go in and find a couple of seats.

They take two of the unoccupied chairs remaining at the rear of the conference room. As the other chairs fill, a man rises at the front and addresses the restless assemblage. It is one of the better known group planners, OSWALD N. ("NUMBERS") OVERPAD.

OVERPAD: All right, everybody. Before the meeting starts I want to give you your time charge for this effort. I'll write it on the blackboard.

Overpad fumbles nervously along the shelf below the blackboard looking for fragments of chalk. Finding none he wets his finger, dips it into the chalk dust, and proceeds to carefully print numbers across the board.

OVERPAD: Now that we've got that out of the way, I want to introduce your new supervisor, Ed Farber!

A wave of murmurs traverses the room. Occasionally distinct comments rise in volume sufficiently to be perceived.

"Good old Ed. This program's gonna be a ball."

"I thought rockets were a joke, but this oughta be a million laughs."

"Where is he? He probably didn't get up in time to make it to the meeting."

A figure slowly rises at the front of the room. It is ED FARBER. *He clears his throat.*

FARBER (*in commanding articulation*): Okay. Let's knock off the chatter and have it QUIET!

A silent pause.

FARBER: So that there won't be any misunderstanding on how this organization is going to be run here's some material I've had prepared. Here's the unit regulations on tardiness. (h*ands out stack of twenty page booklets*). Here's the rules I want followed on security measures and housekeeping. (h*ands out stack of thirty page booklets*). Here's the regulations you'll be expected to obey in ordering materials. (h*ands out stack of 50 page booklets*).

DISGRUNTLED VOICE FROM REAR: Once a Marine, always a Marine!

FARBER: The assistant supervisor in this new unit will be Tony Zachary.

The room fills with murmurs.

"That's my buddy, Zach."

"Tony's one of the old crowd. He'll treat us right."

ZACHARY (*loudly*): If this noise doesn't cease while Mr. Farber is talking, I'm going to start taking names!

FARBER: I want to give you a little background on the purpose of our being here. As you know, we have the job of designing, building, developing, and producing a rocket capable of carrying a crew of men to the moon. This effort, designated the FALAS Project, has been financed jointly by the Air Force and the Canteen Company. I want you all to know you're in on the ground floor of this project because that's exactly where we are beginning. The basic concept for this vehicle was covered in an article by Werner Von Braun in the March 22, 1952 issue of Collier's magazine. I expect everyone here to obtain a copy and familiarize themselves with the design details. The propulsion system will be designated the X-51. In addition I've asked Vietinghoff to visit the company library and conduct a book search on rocket design because he seems best qualified. You did some work on these lines for your B.S. in engineering, right, Bill?

VIETINGHOFF: That's correct, Ed. I received my degree in Book Surveying in Engineering. I'd like to be excused now to go to the library.

FARBER: You may leave. Be sure and don't check any books out under my name though.

Vietinghoff strides out of the conference room.

FARBER (*continuing*): As a guiding principle in our work I want to write down something we should all remember. *(Farber picks up blackboard eraser and proceeds to wipe out previous material*).

OVERPAD (*jumping to feet*): Stop! Stop! You're erasing my charge numbers!

FARBER: I'll write over on this side then. Now pay attention. (*Reaches in pocket*). I brought my own chalk. (*Farber neatly prints in large letters across the board.*)

THE ROCKET IS THE SIMPLEST KIND OF MOTOR; IT HAS NO MOVING PARTS.

ZACHARY: Psst, Ed. It's rocket *engine!*

FARBER (*whispering*): We'll discuss it later. (*addressing people in room*). That's the thought I want you all to keep in mind. Now unfortunately we haven't achieved the ideal. We still have a lot of old fashioned mechanical parts involved. I'm going to give everyone a list of these parts. You can see what we hope to eliminate as we move through our development program.

Farber hands out a stack of 100 page booklets of fine print. Someone stands up in the rear and addresses Farber.

GREENAWALD: How in Hell did I get stuck in this outfit?

FARBER: I want you to know you're all hand-picked for this job on the basis of your previous experience. Along that line I want to introduce my secretary, Miss Darlene Doxy. (*Farber points to Miss Doxy seated at one side of the room. Miss Doxy, played by Debra Paget especially for this picture, has orange hair, wears a tight, low-backed dress of turquoise Italian silk, pumps with four inch heels and smoke grey nylons*).

FARBER: Miss Doxy was selected after careful consideration of many applicants as well many of the other secretaries already established here in the company. Believe me, it was a tough choice, but Miss Doxy one outstanding qualification . . . a B.A. in Physics from the University of Nevada.

COSTELLO (*to Greenawald*): I seem to remember her from somewhere. Her spine looks familiar.

FARBER: You have the picture, people. I want you all to cooperate and get this program rolling.

INT. LIBRARY AT CANOGA FACILITY. DAY

Farber approaches a desk where Vietinghoff sits reading. Stacks of books form a sort of barricade on and around the desk.

FARBER: Say, Bill. Have you completed the literature survey for design ideas?

VIETINGHOFF: As a matter of fact, Ed, I really haven't come across too much on rockets, but there's a wealth of information here.

FARBER: Like what?

VIETINGHOFF: Did you know over one hundred people flew the Atlantic before Lindberg?

FARBER: I didn't. Have you found anything on propellant properties?

VIETINGHOFF: How about this? Do you realize Avogadro didn't know his own number?

Costello rushes up, panting and gesturing wildly.

FARBER: Well, John, how's the assembly of our first engine coming?

COSTELLO (*excitedly*): We've got a problem. We can't get the helium regulator to fit. There isn't sufficient space to mount it.

FARBER (*smiling benevolently*): Now, John. Calm down. You know what to do. Go take a look at the mock-up.

COSTELLO: That's where our problem is. We can't get the mock-up built. (*rushes off*).

FARBER: That boy is as organized as a Mongolian close-order drill. (*to Vietinghoff, sternly*). Look, don't waste my time with that stuff you've been looking up. I need good data! (*walks away*).

VIETINGHOFF (*brooding*): Why is he always pushing so much? I'm not giving him any more of this information. If he wants to know how seedless watermelons are propagated or what they put in an Orange Julius, he can ask someone else!

The scene ends with another lusty stanza from the picture's theme:

"At that big test stand in the sky,
Design need not comply,
Add countless parts and high speed starts,
The Bird won't have to fly . . . "

A QUICK SERIES OF SHOTS

Producer's note: The next set of scenes in the picture is intended to show a high level of industrious activity in the assembly of the first X-51 engines for the research and development test program. The effect desired was that of massive machinery wielded like toys by burly, thick-armed, be-goggled technicians in crisply pressed coveralls and shop coats; corps of hooded welders pouring tongues of flame over intricately formed boiler plate; squads of immaculately attired leadmen and foremen answering questions briskly, and issuing precise orders to the intent army of rocket builders. A large California rocket manufacturer was visited. At this point several hundred feet of film were shot of actual assembly procedures. This film did not meet our expectations and will not be used.

Since most people are unaware of rocket building techniques a substitute will be used. Some footage was given us by the Baldwin Locomotive Works taken in their plant for use in their public relations film, *Riding The Rails Into Tomorrow*. This film will be incorporated into the picture at this point to represent the transition from the drawing board to the final article.)

EXT. SANTA SUSANA MOUNTAIN RANGE. DAY

This is a short scene showing a caravan of fifty-one stake trucks, each carrying an engine slowly up a road into the Santa Susana Mountains behind a large white LOX TRUCK.

This scene dramatically closes with another stanza:

"Oh that big test stand in the sky,
I'll go there when I die,
With hopeful hearts, we'll order out parts,
And we'll get them by and by."

EXT. GAMMA TEST AREA. DAY

ED FARBER, TONY ZACHARY, WALT GREENAWALD and JOHN COSTELLO *are seen walking toward a large low building in Area 2 at Santa Susana.*

FARBER: Let's stop in here and check with the test engineer as to the time of the test. We're a little late. I hope they don't start without us.

GREENAWALD: You have to admit we've made pretty good time on this program. Only a few short months ago this whole engine was on the drawing board and here we are today about to see the first test of the complete X-51.

The quartet reaches the door and Greenawald opens it, gesturing inward to the others.

GREENAWALD: Here we are.

COSTELLO: The place seems deserted. You don't suppose they've all gone down to the test stand already?

ZACHARY: Let's ask that guy over in the corner.

As the four men walk toward the lone occupant of the room, he looks up, quickly slides back his swivel chair, and jumps to a stiffly erect posture. As the camera moves in on him, it is apparent he is fairly young. Rather than a conventional shirt and trousers, he is wearing a uniform-like outfit consisting of a jacket buttoned up to the throat with somewhat form-fitting trousers. The uniform is bright blue with silver piping. A jagged bolt of gold lightning crosses his chest. He speaks.

YOUNG MAN: May I help you?

FARBER: We're development engineers on the X-51 engine. We were notified of a possible test today in Gamma Area.

YOUNG MAN: Oh yes, Sir. That's right. My name is Roger Ramjet and I've been assigned to wait here until you arrived. There is to be a test soon. I'll take you there, Sir.

GREENAWALD: That's fine with us. We'd better not wait for the bus. Do you have a car? The shuttle bus brought us up here.

RAMJET: No, Sir. But I have a forklift outside. We can all take that.

ZACHARY: A forklift!

RAMJET: Yes, Sir. (*moving quickly out of the office*) Just follow me.

The five men exit from the building through a side door to where they encounter a large yellow forklift. Ramjet springs agilely into the driver's position and attempts to start the motor.

RAMJET: The motor needs a little work, but if you'll let me get this moving before you jump on, I think she'll hold out the rest of the way.

The engine of the forklift starts with a minor sputtering, and the forklift rolls slowly forward. The four engineers trot beside it, jumping aboard in turn.

FARBER: Do you really think we'll make to the stand in time, Roger?

RAMJET: I think so, Sir. The test was slipped an hour to tie in with the arrival of Albert Schweitzer who's touring here today.

Ramjet signals a left turn, then brings the forklift onto the main road.

ZACHARY (*to Ramjet*): It's been quite a while since I visited Santa Susana. Your outfit is quite unusual. Are all the test engineers wearing ones like that?

RAMJET: Oh no, Sir. Just myself. They said it would be all right. Besides, I'm not really a test engineer. But I hope to be someday.

ZACHARY: What do you do?

RAMJET: I deliver the oscillograms and charts from the control center to the office.

ZACHARY: On this?!

RAMJET: Yes, Sir.

COSTELLO: Is this all you do?

RAMJET: Sometime I count pips. Before I had this job I ran a forklift in the thrust chamber storage area but I was transferred here because I would always forget to keep the forks low enough. I'd miss the pallet and stick them through the thrust chamber.

GREENAWALD: What's that thing on your hip like a gun?

RAMJET: It's a death-ray, Sir. The instrumentation engineer designed it for me. Man will need these in Outer Space.

FARBER: I see Gamma Area coming up.

ZACHARY: Tough luck! We're late. They've put up the roadblock.

The forklift rolls to a stop amidst a large crowd of mechanics, firemen, industrial security guards, a janitor, and several visitors.

FARBER (*to roadblock talker*): Can we go up to the control center?

TALKER: Sorry. We're on the five minute warning.

For a moment the camera trains itself on a tremendous test stand to which are affixed at the base fifty-one identical engines. From an equally overwhelming propellant tank gleaming with frost. A large plume of white vapor lazily drifts off into the brilliant sunshine.

GREENAWALD (*noticing a mechanic next to him holding a quantity of red objects trailing long wires*): I see you have quite a load there, Buddy.

MECHANIC: Yeah, these are thrust chamber igniters.

GREENAWALD: So I see. They're the new "hen-house" type. I don't know much about the pyrotechnic, but I understand the shape was designed by Frank Lloyd Wright.

ZACHARY: How is it you have so many with you?

MECHANIC (*grumbling*): Well, I was installing them, and they called the five-minute warning and I left. They never give you enough time to finish things right around here.

FARBER: That's always a problem, all right. You work on one of the other stands?

MECHANIC: No, the one you see all tanked up.

FARBER: What! (*pause*) Stand talker! Stand talker! Will you speak to this man please. He has something to tell you.

MECHANIC (*grumbling*): Fifty-one is one hell of a lot of igniters. How do they expect you to get all these things in when they don't give you any time?

FARBER: This place is as organized as a Mongolian Mass Baptism.

INT. GAMMA CONTROL CENTER. DAY

During the delay to install the remaining igniters, GREENAWALD, COSTELLO, ZACHARY, and FARBER *have left the road block and entered the building. Visitors are clustered around the thick glass windows*.

GREENAWALD: This first test of the X-51 has certainly brought out a lot of sightseers. Look! There's Albert Schweitzer.

The instrumentation leadman is observed to pick up a microphone near the test console. He opens a folded piece of paper he has taken from his breast pocket. He depresses the switch on the microphone and reads from the paper.

LEADMAN: Your attention please. There will be a duration mainstage test on Gamma 2 in approximately five minutes. All personnel will leave the stand. Safe areas are behind the roadblock and in the Control Center. *(he neatly folds the paper and replaces it in his pocket, smiling.*)

The five-minute warning siren is heard from without the building. Costello picks up a pair of binoculars from the window ledge and observes the area through the window. The camera shows the view as seen through the lenses. Three rabbits, two squirrels and a small herd of deer are seen running from the brush near the vicinity of the stand to the protection of large rocks nearby. A lunch truck emblazoned with the name SCANDIA RESTAURANT--MOBILE UNIT NO. 2 *rumbles dustily down the stand access road. The mechanic seen earlier at the road block makes his appearance on the stand. He carries a single igniter as he crawls from beneath a thrust chamber. He walks half-way off the stand, looks down startled at the remaining igniter, then scrambles back to the clustered mass of thrust chambers, kneeling at each to peer frantically up inside*.

FARBER: How are things going, John?

COSTELLO: The mechanic can't seem to remember which chamber he missed.

One member of the large crowd of visitors breaks away and comes toward ZACHARY. *He is a dark-skinned* GUJARATI*, wearing a long white linen frock-coat and large white turban under a red metal hard-hat. A large sapphire of approximately thirty carats, affixed to a gold chain around his neck, swings across his chest. The camera observes something else on the chain. It is a large red badge with the word VISITOR. He speaks to Zachary*.

GUJARATI: A sea of pardons, Sahib, but I would ask of you a question.

ZACHARY: Certainly, what can I tell you?

GUJARATI: The engines we view fastened to the structure on the rocks . . . They are possessed of great power?

ZACHARY: Yes indeed. There are fifty-one engines, each delivering over one hundred thousand pounds of thrust.

GUJARATI: By the hand of Mohammed! When they fire, Sahib, will we be safe?

ZACHARY (*smiling condescendingly*): Don't give it a thought. This concrete blockhouse is designed to withstand the vibration and shock.

GUJARATI: Has this mighty engine ever been fired before?

ZACHARY: Not yet. (*still smiling*).

GUJARATI: I see, Sahib. May Allah be with you.

As the visitor departs, Costello sidles up to Zachary and Farber.

COSTELLO: Psst, Tony. I was listening to your remarks to that visitor. I got to thinking and looking around. I saw something I'm worried about.

ZACHARY: What's that?

COSTELLO: Walk over with me to that wall, but don't say anything.

The three casually step away from the others and toward the wall indicated by Costello. Zachary *looks at him quizzically*.

COSTELLO: Look at this. Boy!

ZACHARY (*peering at surface of concrete wall pointed out by Costello*): Hmm. It's a big vertical crack.

COSTELLO: That's right and I'm worried. It's over three feet long.

ZACHARY: Concrete does that sometimes.

COSTELLO: Yes, but you said yourself . . . the whole group of fifty-one engines has never been fired before.

ZACHARY: Maybe you're right. The whole control center might go. Let's mention it to the test engineer.

Zachary, Costello and Farber walk over to Norman Nevercutt, the Test Engineer who is busy putting on a set of earphones and testing the mouthpiece.

ZACHARY: Say, Norm, we want you to look at something.

NEVERCUTT: Sure, Zach. What's up. A chart go out?

FARBER: Not that. Just step over here and look at this wall.

NEVERCUTT (*walking over to view area of wall indicated by Costello*): Oh, you've seen our little crack. Yes, we've got to get Industrial Engineering down here one of these days to do something about that. Every time we test on one of the other stands it gets a little longer.

ZACHARY: Aren't you worried it might get out of hand?

NEVERCUTT: We've made provisions for that. You see that fellow over there? (*Nevercutt points to instrument mechanic looking up at ceiling. He holds a long cord*). He's holding a cutoff button. We've put a redline on the ceiling in the path of the crack. If it gets that far, he'll cut the test.

The man continues to stare upward at the red mark, twelve inches long, painted on the ceiling directly overhead.

The wail of the twenty-second siren ends the discussion. Norman Nevercutt hurries back to the test console leaving Zachary, Costello, Farber, and the instrumentation man staring at the ceiling.

FARBER: This place is as organized as a Mongolian bookie raid.

The engineers resume their positions at the window. Greenawald picks up a spare headset and inserts the plug into a nearby jack.

COSTELLO: How's the count going? All tanks pressurizing properly?

GREENAWALD: I wouldn't know. The football game's coming in on this channel.

In the silence of the control center the soft command "Ignition Start" by Nevercutt turns all eyes to the area below the massive group of engines.

ENGINE: Pop! Pop! Pop! Pop!

ZACHARY: We need something better than those Hen-House igniters.

Driven by tremendous force, dust is lifted into a huge cloud over the area and cherry red gases fill the flame pit.

COSTELLO: Look at it go! C'mon, Baby. All the way!

ENGINE: Rumble! Rumble!

GREENAWALD: It sure makes a heck of a racket.

FARBER: What did you say? I can't hear you with all this noise.

GREENAWALD: It really shakes the building!

COSTELLO: Oh my God! The crack in the wall is getting longer. It's moving toward the ceiling.

ENGINE: Rumble! Rumble!

GREENAWALD: The visitors have started to notice the crack. They look edgy.

NEVERCUTT: It's all right, everybody. Just stay from under the crack. We wouldn't want you to get a piece of cement in your eye.

COSTELLO: Look at it now! It's veered off in another direction. It isn't even heading toward the redline.

GREENAWALD: It's going across the control center!

NEVERCUTT: On the floor, everybody!

ENGINE: Rumble! Rumble! Rumble!

A large "CRACK" *is heard*.

COSTELLO (*lying prone beside Greenawald*): It just hit me like a flash. All kinds of crazy memories were coming to me, you know, when I remembered where I've seen Miss Doxy before. She did walk-on's at the Lido show in Las Vegas.

ENGINE: Roar! Rumble! Rumble!

A louder, more enduring "CRAAACCK" *fills the control center. Dust and concrete chips suddenly rain over the heads of all, obscuring the air. Silence, with equal suddenness, pervades the area.*

COSTELLO (*looking up, choking on dust*): The control center has split in half.

The engineers and observers one by one look up and find themselves in the open air and sunlight. The control center has cracked apart like a coconut. Everyone peers from the rubble in stunned surprise.

NEVERCUTT: All right! Who did it? Who did it? Who chopped the test?

GREENAWALD (*crawling over to Farber and the others, gripping some long, ragged strips of paper*): I've got the E-A's, Ed. Let's go back to the office and check the valve times.

The impact of this heroic note will be enhanced by the insertion of another stanza of the theme of the picture:

"At that big test stand in the sky,
We'll find out when and why,
For only God knows if the pre-valves close,
The way those damn charts lie."

INT. OFFICE OF ED FARBER. DAY

Farber sits at his desk scowling over a mass of papers about him. A figure appears in the doorway. It is Frank Leader.

LEADER: You wanted to see me, Ed?

FARBER: Yes, Frank. I want to go over our latest problems and some of these trouble reports.

LEADER: I suppose you want to talk about chugging?

FARBER: That's a good place to start. Are we really making any progress in eliminating it?

LEADER: Well, I always figure . . . what's a little chugging? (l*aughs feebly*).

FARBER: A little chugging! Don't forget, Frank, we've got . . . (*checks pencilled number on shirt cuff*) . . . we've got fifty-one thrust chambers in this configuration, and they're all chugging.

LEADER: I've thought about that, Ed. You know, about the frequency and amplitude being the same . . . and I know what our real problem is.

FARBER: What's that?

LEADER: Let's hope they never get in phase.

FARBER (*taking two aspirin*): Let's leave that question and talk about this trouble report on pump bearing over-temperature.

LEADER: Which one? I can think of several.

FARBER: According to this, one occurred on test 415 on stand Gamma 2. The number 6 pump experienced a number 3 bearing temperature of 500 degrees.

LEADER: I didn't see that report, but I'm sure it was actually the number 15 pump on test 206 and it was 602 degrees.

FARBER (*nervously*): We've got to be sure, Frank. Remember, we've got . . . (*checks pencilled number on shirt cuff*) . . . we've got fifty-one pairs of pumps on this engine and we've got to keep them straight.

LEADER: I'm straight! I'm straight! I remember, because it was the seventh time we had this happen. In fact, If you'll check, you'll find it was the number 4 bearing on Gamma 3, pump number 29 on test 232 that had the same trouble.

FARBER: Wasn't that pump number 2 on test 229? We pulled it for that reason.

LEADER: No, that was number 42 pump. We pulled it to change over to the thirty-two extra long adapter bolts.

FARBER (*rubbing forehead*): All right, Frank, as long as you're clear. I was afraid you weren't clear on that. (t*humping desk*) Let's be sure we keep these STRAIGHT*! (mumbling to himself*) Von Braun and his lousy fifty-one engines. (to *Leader*) Have you talked up my proposal to the pump unit?

LEADER: You mean the Mark XXX concept?

FARBER (*beaming*): Yes, my pump proposal. Right!

LEADER: Well, (*hedging*) they didn't seem too receptive.

FARBER: What's their objection? Did you explain how it will eliminate some of these problems we're facing?

LEADER: Well . . . we're so far along with the present design and . . . there's the ducting...it's never been tried before . . . I mean . . . well . . . Look at it this way, Ed . . . One big pump?

FARBER (*staring down red-eyed at the trouble reports*): Never mind. I'll handle this one, Frank. Keep on top of this chugging.

LEADER: Good deal, Ed. Will do. (*Frank turns away mumbling*) What's he pushing for? (d*isappears out of office doorway*).

FARBER (*taking two more aspirin*): This business is about as organized as a Mongolian stock market crash.

INT. OFFICE OF TONY ZACHARY. DAY

This scene opens at Zachary's desk. He is observed perusing various 8 x 10 glossy prints of recent explosions. One is a picture of a hole in a thrust chamber seen through the fourth and fifth rungs of an aluminum ladder. From behind, Vietinghoff and Costello approach Zachary carrying miscellaneous blueprints and specifications. They almost collide with two Canteen Servicemen struggling with a huge cart packed full with coffee bags, large pots, milk cans, sugar bags, coin boxes and various tools.

COSTELLO: Here we are, Zach. Vietinghoff and I want to give you our inputs on this valve modification.

VIETINGHOFF: How about coffee first?

ZACHARY: Swell, but this machine has been defunct all morning.

FIRST CANTEEN MAN (*smiling gratuitously*): Stand by. We'll have 'er in service in no time.

ZACHARY: Well, what is the outlook on the valve situation?

VIETINGHOFF: First off, we've been looking into the numerous reports of leakage.

FIRST CANTEEN MAN: Have you got a wrench for the door?

ZACHARY: What wrench?

FIRST CANTEEN MAN: Excuse me. I was asking my buddy for the wrench we use to open the door here on the coffee machine.

COSTELLO: As you know, Zach, it's the same old story. We get these valves off the engine and bench check them and there's nothing wrong.

SECOND CANTEEN MAN: Did you bring the urn for the grounds?

VIETINGHOFF: We've got a lot of good clues as to some forces acting here we didn't suspect.

FIRST CANTEEN MAN: I was told the cups are filling too high. I think we're getting too much cream and overflowing.

ZACHARY: Have we definitely established the valves were leaking on the engine?

SECOND CANTEEN MAN: This machine gave us trouble on this score last month. The cream valve wasn't sealing.

COSTELLO: The LOX leakage rate was reported by Inspection. The real problem was weeding out the non-applicable troubles. The operating solenoids have been hanging up, for example.

FIRST CANTEEN MAN: We haven't had any really bad solenoid troubles, actually. You gotta watch those connectors.

VIETINGHOFF: Well, loose connectors are part of the problem, sure, but I'm only concerned now about real valve leakage.

SECOND CANTEEN MAN: It's a sure bet that the valve closes eventually, but it still lets too much cream flow.

COSTELLO: Until we get these chambers evaluated we can't risk any cream-rich cutoffs. We haven't explored temperature limitations in chamber tubes, besides, we get tube separation.

FIRST CANTEEN MAN: You'll be cream-rich if you clog those coffee tubes. Check for cleanliness in the coffee chamber.

ZACHARY: Have we really determined whether this is a chamber problem or a valve problem, now that you mention it.

SECOND CANTEEN MAN: You can see for yourself the cream valve closing time is slow.

VIETINGHOFF: We can't always say that our LOX valve leaked or was too slow on tests so far.

FIRST CANTEEN MAN: We're getting LOX in the coffee tubes when I throw the selector switch to BLACK.

COSTELLO: The valves operate all right in COMPONENT position. Maybe our test selector switch contacts are bad.

ZACHARY: The coffee valves always operate better in components but not that much better.

SECOND CANTEEN MAN: Considering all you've said, this problem's getting stickier than I figured. Maybe we ought to get a company design rep out here on this.

VIETINGHOFF: Well then, it appears we need more data on valve times in both the COMPONENT and DOUBLE SUGAR positions.

ZACHARY: Right. Get this into the test schedules and check with me in two days.

FIRST CANTEEN MAN: Let's orifice the cream line and try that for awhile.

COSTELLO: Okay, Zach. We'll get a list of these orifice sizes out this afternoon, notify the stand engineer and we'll see you Thursday.

Zachary waves off Vietinghoff and Costello and buries his face in his hands.

ZACHARY (*in a dry whisper*): I . . . hope . . . we . . . don't . . . have any . . . big . . . problems.

INT. OFFICE OF ED FARBER. DAY

Ed Farber sits at his desk moodily staring at a program schedule taped to one wall. There are numerous erasures and extensions to the bars representing the respective tasks of the program. As he ponders upon it, the piece of Scotch Tape holding it lets go and the schedule drops lazily to the floor.

FARBER (*loudly*): Miss Doxy! My schedule fell down again.

Miss Doxy saunters in, looking piqued.

FARBER: Can't you give me another piece of tape?

MISS DOXY: I don't have any more. You haven't signed the requisition I need for stationery.

FARBER (*brusquely rummaging through pile of papers on desk*): Do I have it?

MISS DOXY: There it is , Stupid, right under your nose.

FARBER: If that's it, what are all these numbers?

MISS DOXY: The new system at stationery. All office equipment must meet Mil Specs. If you want Scotch Tape, you specify AN 3225.

FARBER: What's AN 216S?

MISS DOXY: Paper clips. The "S" means the silvery kind. Would you like me to recite the numbers for you? I've memorized all of them.

FARBER: No! No! Just send in Zachary.

Miss Doxy saunters out.

FARBER: This place is about as organized as a Mongolian tobacco auction.

Zachary strides in carrying a cup of lemon-lime. By his mannerisms and speech, a change in his personality will be conveyed. The weeks of grueling concentration and effort have produced a sobering, maturing turn to his nature. He wears a pair of conservative grey slacks, conservative black oxfords; there is a touch of grey at his temples. He calmly adjusts a conservative grey necktie that bears a hand-painted rendition of a coiled rattlesnake and the words, "Don't Tread On Me."

FARBER: Here, Zach, check with Leon Da Vinci, supervisor of the Performance Control Unit on this failure report. This is the third of its type this week.

ZACHARY: Oh, this item! Those people have got to get some work underway on wrapping this problem up. I'm going to project out this analysis.

FARBER: Good idea, Zach. Project it out.

INT. OFFICE OF SUPERVISOR LEON DA VINCI. DAY

Zachary strides in sipping his lemon-lime, humming and fingering his conservative necktie.

DA VINCI (*looking up from a mass of drawings on his desk, sipping coffee*): Hello, Tony. How's tricks in the FALAS Project?

ZACHARY: Just great, Leon. I'm very worried though about the status of the Isp meter we use on our engine.

DA Vinci: It's a little gem. What's the problem?

ZACHARY (*mouth twitching*): You must know what the problem is. We've got LOX leakage at the seal of the Isp meter.

DA VINCI: We've had a little trouble. I don't think we should over-emphasize it.

ZACHARY (*pounding on desk*): A little trouble! What about all those failure reports.

DA VINCI (*assuredly*): We took care of them. You experienced LOX seal leakage and we took care of it.

ZACHARY (*massaging a swollen vein in his forehead*): Yes, but HOW?

DA VINCI: We added a LOX seal drain line.

ZACHARY (*turning pink*): All right. Put it this way. We're losing too much LOX.

DA VINCI (*calmly plucking report from accordion file in desk and waving it at Zachary, who has turned a brilliant survival red*.): That's not what *my* data shows.

ZACHARY: That's because it's leaking UPSTREAM of the Isp meter! Now when are you going to change the seal design?

DA VINCI (*smiling into blueprint he holds proudly before him*): The design looks good to me.

The camera observes Zachary pick up an X-acto knife from the desk with which he slashes wildly through the blueprint.

ZACHARY: I'll show you what I think of your design.

DA VINCI (*recovering from horrified stupor*): And here's what I think of YOU! (*throws cup of steaming coffee at Zachary, staining his neck-tie*.)

ZACHARY: I say your design stinks. (*throws lemon-lime into Da Vinci's face*.)

DA VINCI: Oh, my eyes! (p*icks up* STANDARD OPERATING MANUAL *and drops it on Zachary's foot*.)

Zachary lunges across the desk top to wrap his hands around Da Vinci's throat. He throws Da Vinci to the desktop.

DA VINCI (*gasping*): You're . . . choking me!

ZACHARY (*rolling blindly over desk-top with death grip on Da Vinci's throat*): Damn you. When do I get that design change?

DA VINCI (*turning blue*): The "B" change just came out. It's too soon for the "C" change.

Costello strolls by and pokes his head into the office.

COSTELLO: It's lunch time, boys. Are you ready to eat?

ZACHARY (*to Da Vinci*): Let's knock off and eat. How about going out for lunch? I'll drive.

DA VINCI: Let's do that. I saw the menu at the cafeteria and I had it for supper last night.

*As the scene fades, Da Vinci throws his arm over Zachary's shoulder, and they walk slowly toward the stairway. Costello follows them out.**

INT. CONFERENCE ROOM. DAY

A man from the photographic department is seen deftly threading a strip of 16 millimeter film into a projector from a large reel. He has his equipment set up at the end of a long polished conference table. The camera pans along the table displaying the presence of the important engineers of the X-51 development unit: JOHN COSTELLO, WALT GREENAWALD, WILLIAM VIETINGHOFF, TONY ZACHARY, and FRANK LEADER *who is observed sketching out a home sprinkler system on a pad he found on the conference table. They are all bunched up around Miss Doxy.*

The camera continues to move to the front of the room where Ed Farber stands before the white background of the projection screen. Near him is a man not seen previously in the picture.

FARBER: You fellows will be happy to know the films arrived today from Florida showing the launching of the first unmanned FALAS vehicle. As you know the flight was not a complete success. In line with the requirements of your accelerated program the next flight will be manned and has as its target the moon! We have only a few weeks in which to make any last minute changes. As you watch this film, I want you to look for areas of possible operational difficulties or improvements. Let 'er roll, operator. I'll get the lights.

*The room is darkened and the projection of the film begins. The screen shows a long yellow trailer bearing the horizontal form of a huge space vehicle rolling slowly toward a launching pad.***

The audience of engineers slowly nods approval. The room is silent save for the soft whir of the projector.

FARBER (*narrating*): I want you to observe the combined action of the crane and ground-handling trailer during the erecting operation.

*Producers note: The violence involved in the "projecting" scene will require that it be deleted for showing in certain European and South American Countries.

**Producer's note: For this scene we were able to get film clips of the delivery of a Redstone missile at White Sands. It probably will not be recognized as such.)

COSTELLO: Look at that yuk with the hoisting pulley. He's supposed to put the hook through the lifting clevis. He's putting it on the main LOX tank pressurizing line.*

FARBER: Hmmm. I didn't notice that the first time I saw this. Make a note of that, Miss Doxy.

MISS DOXY: What do you expect me to do? Take shorthand in the dark!

GREENAWALD: The camera just showed that joker's face. Look, it's Fred Fleegle.

LEADER: Good old Fleegle; he always was a raft of fun.

FARBER (*narrating as views change on the screen before them*): Notice the number of men involved in this propellant loading operation.**

COSTELLO: There's Fleegle again. Oh Boy, he doesn't seem to know which hose goes where. Ha!

FARBER: Watch very closely at the end of tanking. For an instant you'll notice an overflow problem.

GREENAWALD: Look at that Fleegle, will you. Hee! Hee! Now he's doing a little dance of some kind for the camera. What a ham!

Muffled laughs fill the darkened room.

FARBER: Now here comes the shot of the launch itself. Unfortunately only one camera was working at this time, but it caught everything. It's really impressive. Just take it in, boys. The launch of the greatest space vehicle the world has ever seen!***

FARBER: Now watch as it begins to program over. You'll see the thrust vector control system go haywire.

The vehicle is quite high now and veers from its vertical ascent. The sky grows a deep indigo. The exhaust flame is brilliant orange. Suddenly the vehicle starts to shimmy and spin in flight. It appears to depart completely from a normal trajectory then disappears into a cloud layer.

*Producer's note: To show the hoisting operation we will use shots of a THOR installation at Vandenberg Air Force Base.

**Producer's note: For this shot we'll use a portion of a Vanguard progress report film.

***Producer's Note: Here we will use good shots of the lift-off of a V-2.)

As the audience groans, the film runs out. The lights are turned on again and Farber looks to his co-workers. The camera moves in to view the expression on his face as he speaks. His eyes seem tear-rimmed.

FARBER: What you have seen was the result of a failure in the guidance system. To help explain what happened I invited Larry Loopnode from the Flight Analysis Group to give us the story.

LARRY LOOPNODE: Well, Fellows, I didn't come here today to snow you with a lot of control system mumbo-jumbo. Heh! Heh! Rather than drag in a lot of LaPlace transforms let me put the problem on simpler terms you can understand.

GREENAWALD (*to Costello*): If I thought that was a crack! . . .

LOOPNODE: As you people know, servo systems can suffer from two basic types of disturbances. The first might be crudely described as slow pulsations of undampened overshoot in the system of a positive and negative nature, known as "hunting." In our case this manifests itself in oscillations of the vehicle about the longitudinal axis, as you saw, which we have chosen to call "rocking". The second disturbance is a continual movement of the system equilibrium away from its original null or "creeping". This results in a slow continuous twisting of the vehicle which we have termed "rolling". The condition of "rocking" may actually be superimposed on the "rolling". (*Loopnode demonstrates with hands.*)

Another big difficulty was turned up when we discovered that there exist certain control system resonances. A low frequency oscillation appears to be caused by the accumulator volume, while a high frequency seems to be excited by the hydraulic pump. Now, if you remember the heterodyne principle you find in electronic mixer circuits, you know that when you combine two frequencies, they "beat" together to produce the sum and difference frequencies as well as the original two. Well, it appears that the generation of these beat frequencies is deleterious to our servo-valve operation. To sum it up, fellows, we plan to solve our problem by cleaning up "rock and roll" and getting rid of the "beat generation".

Everyone applauds vigorously at these concluding remarks.

FARBER: Well, Boys, it appears we've made it. And come June it's the big show itself. Next month we put men on the moon!

EXT. CAPE CANAVERAL. DAY

Against the deep Blue sky and ocean stands the FALAS VEHICLE, poised and ready. A large crowd has assembled. The cheers and laughter almost obscure the recitation from the loudspeaker of the pre-countdown procedure. The camera pans along the happy faces of wives, mothers, fathers, children, motel and bar owners, vacationing transients and left-over

Vanguard followers. They wave banners and placards bearing the words MOON OR BUST, WE'RE WITH YOU ALL THE WAY, LEAVE THAT PAD, DAD, HOORAY FOR EARTH, AND MAN WAS NOT MEANT TO INVADE SPACE. *The camera gets a close-up of the large conical loudspeaker delivering the preparation instructions*.

LOUDSPEAKER (*raucously*): Propellants are now loaded. Crew members will now enter launch area and board the moon vehicle.

Six men wearing G-suits spring unexpectedly from doorways and climb into waiting jeeps which roar dustily toward the launcher. at the base of the vehicle the jeeps halt and the men start to ascend a ramp to the closed hatch. The cheers of the crowd are renewed. Silence suddenly pervades the area. The camera sees the hatch swing open to disclose within the figures of two men also in G-suits (but not as flimsy as those used by the crew members). The camera moves closer and the faces of the two men reveal them to be TONY ZACHARY and ED FARBER. *They wave off the boarding crew members with weird, pistol-like weapons.*

FARBER: Back! All of you. Back!

The camera pans the questioning faces of the crowd.

FARBER: I see you look puzzled. You all came here to see the launch to the moon. That is not its target. Its destination is Mars and then beyond to Venus. And this rocket motor . . .

ZACHARY (*interrupting*): Engine.

FARBER: . . . is capable of accomplishing the trip. We saw to that. Now you know why I pushed so hard for success. You know me as an Earthman like yourselves. You were all taken in. My real name is Ek Frarger; I am Martian.

Still pointing his weapon at the crowd, Frarger reaches up and pulls away a rubber mask. Underneath the fake but devilishly handsome features is a horrible, alien countenance. The crowd gasps.

FRARGER (*to Zachary*): I must begin the launch procedure. Take control here. (Frarger gestures to Zachary and disappears into the dark interior. Muffled threats pass among the bystanders.

ONLOOKER (*waving fist*): Who are you, dirty betrayer?

ZACHARY: I am a Venusian. My real name is not Tony Zachary. On Venus, to where I now return, I am known as Klaatu Zachary.

A great whine is heard as the propellant tanks pressurize. KLAATU ZACHARY *steps back, as if to close the hatch. The crowd roars in protest. Fifty-one ignition stage pops are heard as the engines light off.*

VACATIONING TRANSIENT (*waving old-fashioned glass*): Let us see your face, Venusian. Let's see what a Venusian is like. Take off your rubber mask.

ZACHARY (*barely heard above the roar of the engines*): I'm not wearing a mask. This is how Venusians look.

The hatch closes and the great vehicle shudders. The launcher beams fall away and the vehicle raises itself off the pad. It accelerates and streaks into the blue emptiness of the Florida sky, its fifty-one chambers chugging all the way. The FALAS has been launched.

Frankie Laine:

"That big test stand in the sky,
That big test stand in the sky,
Where the engines never run rough,
And the tanks never run dry...."

The
End