SURVEYOR

Lunar Landmarks

Volume I Number 1

January 8, 1965

STANDING ON OUR OWN FEATS

Volume I, Number 1: Lunar Landmarks, your Surveyor Team Newsletter, is launched. Lunar Landmarks will come to you regularly, keep you informed of team progress and outstanding accomplishments, and let everybody share in the pride of day-to-day achievements leading up to the final lunar landmark--a soft landing of a Surveyor spacecraft on the moon.

Surveyor Day left little doubt about the importance of our task. Before the year is out, the eyes of the world will be focused on what we are attempting to accomplish. Surveyor is a key step in the vital race for manned exploration of the moon. When SC-1 blasts off from Cape Kennedy, American prestige in space will be resting squarely on our shoulders. What we do now--between Jan. 11 and Aug. 2--may well determine how the rest of the world views American --and Hughes--knowhow.

Time, quality, performance are of the essence. Simply stated, it's up to us. Lunar Landmarks will let you know how we are meeting the challenge.

SURVEYOR OPEN HOUSE JAN. 17

We are happy to announce Surveyor Open House Day--Jan. 17--your day to show your family the status of Surveyor.

This is your personal invitation from Fred Adler, Joe Ferderber, and Bob Roderick to bring your entire family into the plant for first-hand, close-up views of the dramatically modern electronic assembly areas in Bldg. 350, the space age testing equipment in the Space Environment Simulation Laboratory, and the stars themselves--Surveyor spacecraft.

Open House hours are from 10 a.m. to 4 p.m. For fast, easy access to the tour entrance in the El Segundo Division Cafeteria, park in the lots shown on the map on the last page of this Newsletter. In the Cafeteria your family will see brief films on the Surveyor program and Ranger's close-up TV shots of the moon. The tour route will be clearly marked as you leave the Cafeteria. You'll pass the Data Processing Center, Minuteman Clean Room with Surveyor hardware displays, the spacecraft, and the Surveyor command and data handling console that will be installed at the Johannesburg, South Africa, Deep Space Station. Then, it's on to Bldg. 365. Here, you'll see the T-21 prototype spacecraft and the huge thermal-vacuum test chamber with its unique solar simulator.

There'll be other sights to impress young and old, of course, but the important thing is that your spouses and youngsters will have first-hand info on what keeps you busy at least eight hours a day and how important your effort is to the total Surveyor Program.

TIPS FOR MILADIES, MOPPETS

Though the tour is not arduous, it is suggested that women wear comfortable walking shoes, preferably flats. And, because food or beverages will not be available, you might want to make sure that the youngsters are well-fed and their thirst quenched before they begin the tour. Rest rooms will be clearly marked.

TIPS FOR THE TEAM

Don't forget your ID cards and badges. At least one member of each party must be a team member. So wear your badge--it's one of distinction.

TIPS FOR EVERYONE

The usual company rules prohibiting bringing cameras, radios, and fire arms into the plant area will be in effect. And, to make the tour more enjoyable for your family, a brief history follows.

SURVEYOR STORY

Surveyor is one of NASA's key projects aimed at exploring the moon. First in the series is Ranger, the hard-landing vehicle that produced scientifically sensational photos of the moon last July in the flight of Ranger 7. Surveyor is the next unmanned program and forerunner to Apollo--the spacecraft that will put man himself on the moon.

Surveyor will soft-land on the moon and return valuable engineering and scientific data to earth via television and advanced telemetry equipment. Both Surveyor and Ranger are under the direction of the Jet Propulsion Laboratory in Pasadena.

Hughes won the Surveyor development contract in 1961 following a design study in 1960. The contract covers development and manufacture of the spacecraft and ground control equipment, plus the complicated planning and conduct of the missions.

During the course of the developmental phase, there have been technical and schedule problems as well as changes in program objectives. Some of these have caused unfortunate delays.

Now, the program leading to a first launch in the fall of 1965 has been established. The Centaur performed with general success in a launch last December. Basic spacecraft design has been defined. The first flight spacecraft has received initial system tests. Command and data handling equipment for the Deep Space Stations will be installed in the next few months. All program elements are "go." The "final sprint" toward the Aug. 2 spacecraft shipping date is under way.

AMONG THE CAST OF CHARACTERS

SC-1--The first flight spacecraft, in systems test.

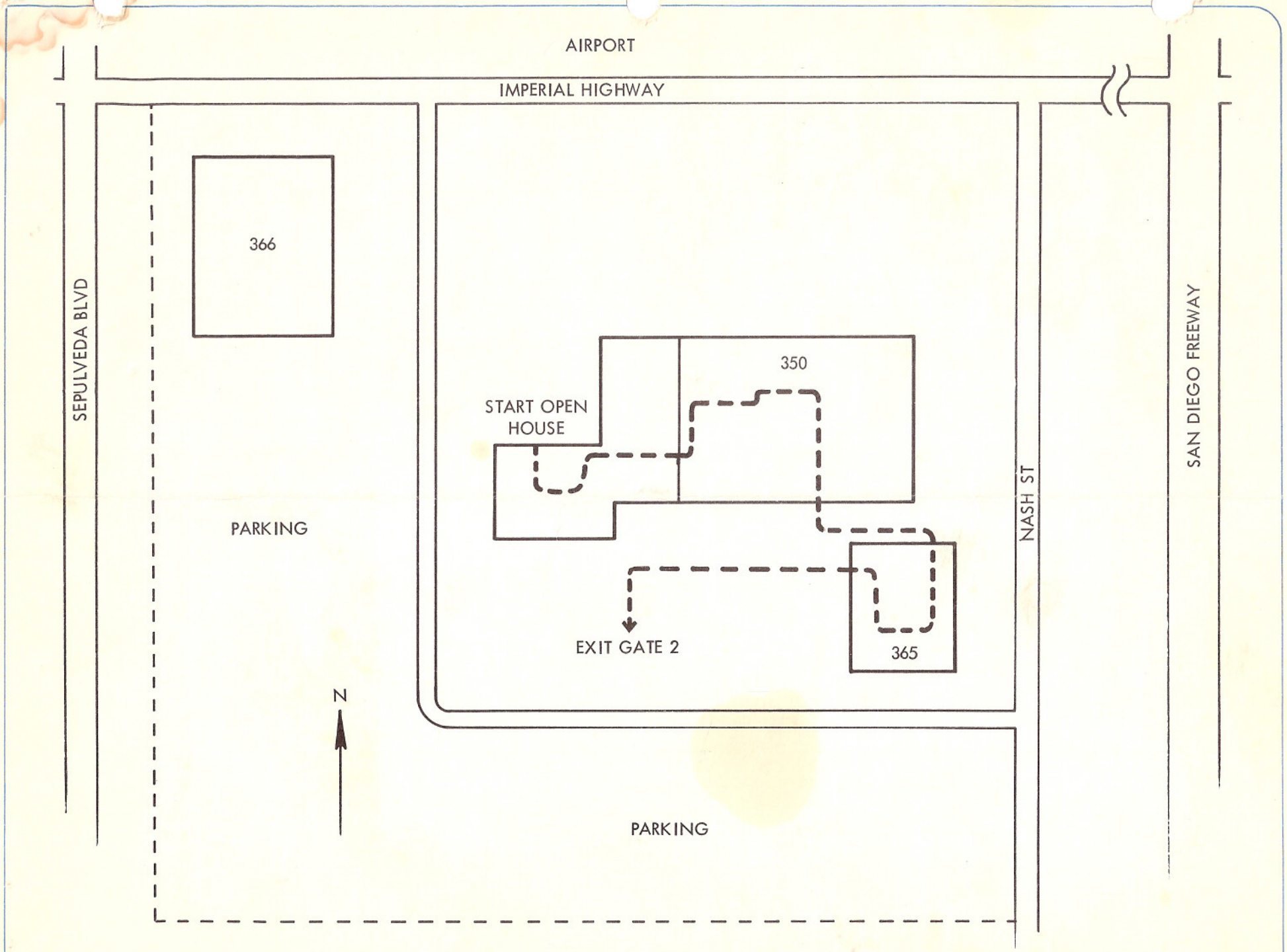
SC-2--Second flight spacecraft, in final assembly.

T-21--Prototype spacecraft, similar to actual flight spacecraft. Will receive full program of system type-approval testing in which limits of flight requirements will be exceeded to determine design margins.

T-2--Series of vehicles used to test spacecraft lunar descent capability. T-2 weighs only a fraction of actual spacecraft so that descent characteristics in earth gravity will simulate actual spacecraft operating in lunar gravity.

S-2A--Spacecraft simulates real spacecraft from structural standpoint. Has undergone vibration, drop tests simulating conditions during boost on Centaur, retro engine firing in descent to moon, and final touchdown.

TCM--Full scale thermal control model to be used to test provisions for keeping spacecraft temperatures within acceptable bounds. Spacecraft paint patterns, insulated equipment compartments, heaters, and thermal switches are parts of thermal control system.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START OPEN HOUSE
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