

REBRIEFING/APOLLO LUNAR LANDING

SECURITY GRADE : GENERAL

For release to all newspapers, TV and radio stations along with President's message to Spacecraft Commander.

E M B A R G O E D UNTIL ONE HOUR BEFORE APOLLO LIFTOFF.

THE MOON is an airless, desolate world, totally unsuitable for habitation by man. For survival on the Moon, astronauts are provided with suits and Life Support equipment which provide and maintain conditions similar to those found on Earth. The astronaut literally carries an 'Earth environment' with him.

Since the Moon has no atmosphere, there is no wind or rain. What little erosion there is is caused by millions of Lunar day-and-night cycles in which the fierce heat of the Sun scorches the Lunar surface by day. It cools abruptly during the night, causing the rocks and 'topsoil' to expand and contract, crack and fuse together again, in endless repetition. This process modifies the geography and appearance of the Lunar landscape over thousands of years.

The landscape will be desolate, rock strewn, angular. Gradients will be steep, features harsh and craggy ... a sharp, bright desert; but in the shade, deep inky shadows in which any colours will vastly change their values.

The ground will be covered to a depth of three feet with pulverised rock of uniform consistency. To walk on, it will feel crunchy, like snow or soft lava.

Gravity will be one sixth of Earth's. An object thrown would tumble away apparently in slow-motion, but the distance it would travel would be vastly greater than on Earth. Dust thrown up by the weighted boots of the astronauts will settle very slowly like the disturbed mud from the bottom of a pond.

At first, the astronauts will venture out cautiously, concentrating at every step to maintain balance and become used to walking under such alien conditions. Distances will be deceptive. The blinding quality of the light on the Moon will require astronauts to re-assess judgement of distances.

It is a silent world. Apart from the crackle of radio communication in his helmet, the astronaut will hear only the crushing of his boots on the crisp ground-layer (the sound will carry up through his suit), his own breathing magnified several times, and the rhythmic beating of his heart.

His sense of isolation will be acute. If he looks up, he will see his native Earth hanging like a massive ball in the sky. His clarity of vision will be stark, since he is not looking through an atmospheric haze that distorts and clouds celestial objects. Earth will appear to be near ... and very unreal. The psychological impact of this moment will be profound ... even frightening. But it will be brief, for the astronaut has many tasks to perform that will divert his attention from thoughts of his situation.

LUNAR SCIENTIFIC EXPERIMENTS

Just as man has been studying the Earth for centuries, speculating about its origins and development, its structure, atmosphere, seas - adding little pieces of information until a vast body of scientifically-proven knowledge has been accumulated, so the Lunar landing will mark the beginning of factual study of the Moon.

The astronauts will walk out on to the Moon with packs of scientific equipment. They will have a kit of specially designed tools with which to do their work. They will unpack the scientific instruments and arrange them on the Lunar surface around the Lunar Craft according to carefully worked-out patterns.

We want to learn about the surface of the Moon, what it is made of. Is it the same all over? How does it change at different depths? What is the core of the Moon made of? Does the Moon have a magnetic field? Is the Moon a dead world, or the core of the Moon still active and moving? And most of all, is there any organic life, no matter how crude and primitive, on the Moon? One of the devices will continue to operate long after the astronauts have gone, giving a constant supply of information over a long period.

When the Lunar stay is over, all equipment, including tools, drills, optical devices, measuring aids - even cameras, will be left behind: they are replaceable. All that will be taken back to Earth will be the priceless photographs, data and specimens obtained on the Moon, and these will be elaborately protected so that they can be examined on Earth under conditions that duplicate the Lunar environment.

The information that the instruments will supply and the samples that the astronauts bring back to Earth with them will be examined and analysed by 110 scientists from the USA and Canada, Britain, Finland, Germany, Switzerland and Japan.

The 50 lbs of material from the Lunar surface will be received, processed and quarantined for distribution to the various

investigators at the Lunar Receiving Laboratory. They will be stored in a vacuum in order to preserve the samples in 'Moon condition'. All experiments and analysis will be carried out behind 'biological barriers' to eliminate contamination and to ensure that Earth quarantine is preserved.