

SCALE APPROXIMATE
 0 50 cm
 CONTOUR INTERVAL 2 CENTIMETRES (APPROXIMATE)
 DATUM APPROXIMATELY VERTICAL THROUGH FARTHEST
 VISIBLE PART OF ROCK

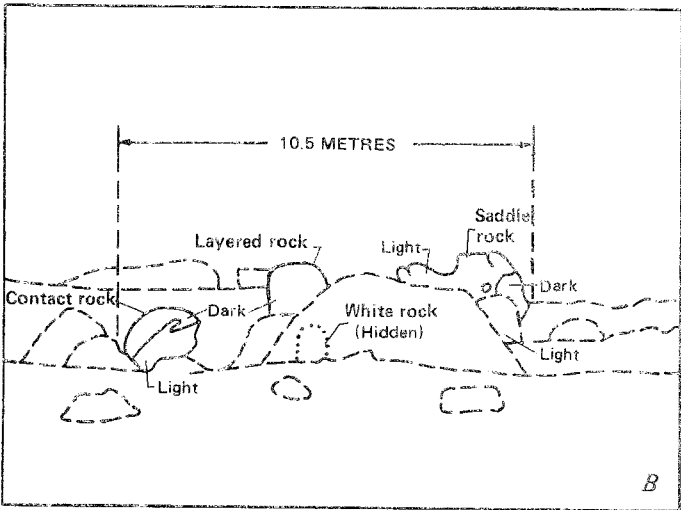


FIGURE 43.—White rocks area from station C'. A, West-northwest view showing the tonal contrasts between the major rock divisions. The lower part of the White rocks area is obscured by a large trapezoidal mass of gray rocks in the middleground. Enlargement of part of NASA photograph AS14-64-9099. B, Sketch showing tones and informal names.

FIGURE 42.—Station G rock. A, View toward south. (Part of NASA photograph AS14-68-9461.) B, Topographic map showing fractures. See figure 35 for explanation of symbols. Topography drawn by Raymond Jordan from NASA photographs AS14-68-9460, 9461.

shades of gray, although brown or olive is used occasionally as a modifier.

Size ranges of fragments.—Fragments range from minute particles below the resolution of the lunar surface photographs to boulders measured in metres. The largest boulders near Cone crater seen in Lunar Orbiter photographs are approximately 15 m across. The largest rock sample (14321) returned by Apollo 14 was 23 cm in diameter and weighed approximately 9 kg.

Fines: Assessment of compaction.—Variations in firmness of the lunar soil have been documented by descriptions and photographs and by soils mechanics measurements (Mitchell and others, 1971). No attempt

is made here to be quantitative, but rather to give an indication of relative firmness by interpretation of photographs or by comments from the crew. The softest areas are typically rims and inner walls of fresh small craters.

Slopes.—In most cases slope angles are not given, although they can be determined from photographs and topographic contours. The slopes of the west side of the Cone crater ridge where traversed are generally less than 8°, although the crew traversed local grades up to 12° or 15°. Slopes associated with documented sample areas may help to indicate possible directions of movement of fine-grained material.

TABLE 3.—Summary of photogeologic rock-type characteristics

Code	Location	Surface texture	Erosional resistance	Clasts (color and size)	Occurrence
<i>Light rocks</i>					
L1	Layered rock	Smoothly undulating	High	Light; from <1 cm to several centimetres	Layer
L2	Saddle rock	Smooth	High	Light and dark; from <1 cm to several centimetres	Well to poorly layered
L3	Saddle rock	Knobby, lumpy	High	Light; a few centimetres	Layer
L4	Saddle rock	Moderately smooth	Moderate	Light; ~1 cm	Underlies a surface that slopes south
L5	Saddle rock	Moderately rough	Moderate	Dark; ~1 cm	Irregular clasts
L6	Contact rock	Finely rough	Moderate	Light; from <1 cm to a few centimetres	Irregular layer
L7	White rock	Granular	Moderate	Light; ~1 cm	Block
L8	All rocks	Too fine to tell	Moderate to high	Unknown	Clasts
<i>Dark Rocks</i>					
D1	Layered rock	Smooth	High	Unknown	Clasts
D2	Contact rock	Finely rough	Moderate	Light and dark; ~1 cm	Layer
D3	Layered rock	Bumpy	Moderate	Light and dark (several centimetres)	Layer
D4	Saddle rock	Coarsely hackly	Low	Light; from ~1 cm to tens of centimetres	Irregular area

SAMPLES

14041-14046 (FRAGMENTS FROM SAME ROCK)
(FIGS. 49, 50)

Station: A

Location: 150 m NW of LM and 90 m N of North Triplet crater
Rock type: Fractured fine-grained friable breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Level

Fragment population:

Distribution and size range: Sparse, from limit of resolution to 20 cm

Color: Light gray

Shapes: Knobby, irregular

Fillets: Poorly developed

Apparent burial: $\frac{1}{8}$ - $\frac{1}{4}$

Dust cover: Moderately high

Fines:

Color: Light medium gray

Compaction: Firm

Craters:

Distribution and size range: Abundant 10- to 30-cm craters. Sample from south rim of a 6- to 8-m subdued crater

Shape: Moderately sharp to subdued

Ejecta: Small 20-cm fresh crater west of sample has cloddy ejecta

SAMPLE CHARACTERISTICS

Sample 14041

Size: Originally about 10×8×6 cm; 346+g

Color: Light olive gray

Shape: Originally elongate, blocky

Fillet: None

Apparent burial: $\frac{1}{8}$

Dust cover: Moderately high

Comparison with other rocks in area: Appears similar to other large fragments in sample area

Probable origin: Soil breccia formed from a nearby impact

14047 (FIGS. 51, 52)

Station: B

Location: 330 m NE of LM and 65 m NNW of rim of Weird crater
Rock type: Fine-grained clastic breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Locally slopes to the north but generally flat. In immediate sample vicinity slopes slightly steeper to north into floor of 40-cm crater

Fragment population:

Distribution and size range: Sparse from limit of resolution up to 10 cm

Color: Light brownish gray

Shapes: Blocky, hackly with subangular edges; subrounded on exposed top surfaces

Fillets: Moderately developed

Apparent burial: $\frac{1}{4}$ - $\frac{1}{3}$

Dust cover: Moderate to heavy

Fines:

Color: Light medium gray

Compaction: Moderately firm to soft

Craters:

Distribution and size range: Abundant 3- to 50-cm craters

Shape: Subdued except for 50-cm crater with raised rim in upper center of documentary photographs AS14-64-9073 and 9074

Ejecta: Mostly fines with a few fragments; two 10-cm fragments (including 14047) on rim crest of 40-cm crater

SAMPLE CHARACTERISTICS

Sample 14047

Size: 5×5.5×10 cm; 242 g

Color: Brownish gray

Shape: Blocky with hackly surface, subangular corners; fractured; subrounded on top exposed surfaces

Fillet: Moderately developed

Apparent burial: $\frac{1}{8}$

Dust cover: Moderate to heavy

Comparison with other rocks in area: Appears similar to two other large fragments in the panorama photographs taken at station B

Probable origin: Ejected from Center Triplet or Cone crater
Comments: Glass spatter covers buried edge of 14047. Rock very friable

14051 (FIGS. 53, 54)

Station: C'

Location: 1.29 km ENE of LM and approximately 95 m SE of rim of Cone crater

Rock type: Fine-grained, polymict breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Gentle southward slope

Fragment population:

Distribution and size range: Abundant from limit of resolution to 1.5-m blocks

Color: Medium gray to very light gray (almost white); brownish gray

Shapes: Irregular; subrounded to rounded on exposed surfaces

Fillets: Moderately to well developed

Apparent burial: ½-¾

Dust cover: Moderate to high

Fines:

Color: Brownish gray

Compaction: Firm

Craters:

Distribution and size range: Abundant 5- to 70-cm craters in and near sample area

Shape: Moderately subdued to subdued

Ejecta: Blocky ejecta around several of the 50- to 70-cm craters

SAMPLE CHARACTERISTICS

Sample 14051

Size: 3×3.5×6 cm; 191.51 g

Color: Pale brown

Shape: Blocky, subangular to subrounded

Fillet: None

Apparent burial: ¼

Dust cover: Moderate

Comparison with other rocks in area: Appears similar; slightly less buried than most of the fragments in the area

Probable origin: Ejected from Cone crater

14053 (FIGS. 55, 56)

Station: C2

Location: 1.21 km ENE of LM and approximately 130 m south of rim of Cone crater

Rock type: Crystalline plagioclase-rich basalt. (Assumed to be a clast from breccia boulder)

SAMPLE AREA CHARACTERISTICS

Slopes: 10°-15° south away from rim of Cone crater

Fragment population:

Distribution and size range: Moderately abundant, from limit of resolution to 2.5 m

Color: Medium gray to light gray

Shapes: Larger boulders rounded; smaller fragments angular to rounded. (Some may be clasts from coarser breccia)

Fillets: Well developed on large boulder; absent on smaller angular fragments

Apparent burial: ½-¾

Dust cover: Heavy

Fines:

Color: Medium gray

Compaction: Firm

Craters:

Distribution and size range: Abundant small irregularities <10 cm. Very few distinct 15- to 30-cm craters

Shape: Irregular, subdued

Ejecta: Within the continuous ejecta blanket of Cone crater

SAMPLE CHARACTERISTICS

Sample 14053

Size: 8×6×3 cm; 251.3 g

Color: Salt and pepper gray

Shape: Slabby, rectangular with rounded corners; one side freshly broken, unweathered; the exposed surface displays rounding and micrometeorite pits

Fillet: Well developed on host boulder. Sample itself dusty, may have been partly covered by fillet material

Apparent burial: ⅓-½

Dust cover: Moderately heavy

Comparison with other rocks in area: Sample not identified, but presumably is a clast from the large breccia boulder and is not the only one of its kind, although crystalline rocks are relatively rare in the Apollo 14 samples

Probable origin: Ejected from Cone crater

14068-72 (FIGS. 57, 58)

Station: C'

Location: 1.28 km ENE of LM and 100 m SE of Cone crater rim

Rock types: Crystalline rocks; diabasic to feldspar-rich (with pyroxene, olivine, plagioclase)

SAMPLE AREA CHARACTERISTICS

Slopes: Locally flat; generally slight slope to south

Fragment population:

Distribution and size range: Abundant from limit of resolution to 75 cm. Mostly derived from Cone crater

Color: Light to medium gray

Shapes: Angular to subrounded

Fillets: Poorly to moderately well developed

Apparent burial: Less than ¼-½

Dust cover: Area too disturbed to differentiate original dust cover from man-made

Fines:

Color: Light gray to light brownish gray

Compaction: Moderate

Craters:

Distribution and size range: Entire area of photo documentation too disturbed to see any intact craters

Ejecta: Materials ejected from 30-m crater just south of station C', which were originally ejected from Cone crater

SAMPLE CHARACTERISTICS

Sample 14068

Size: 4.2×3.2×2.7 cm; 35.47 g

Color: Medium dark gray

Shape: Blocky, angular, irregular

Fillet: Area too disturbed to discern

Apparent burial: Area too disturbed to discern

Dust cover: Area too disturbed to discern

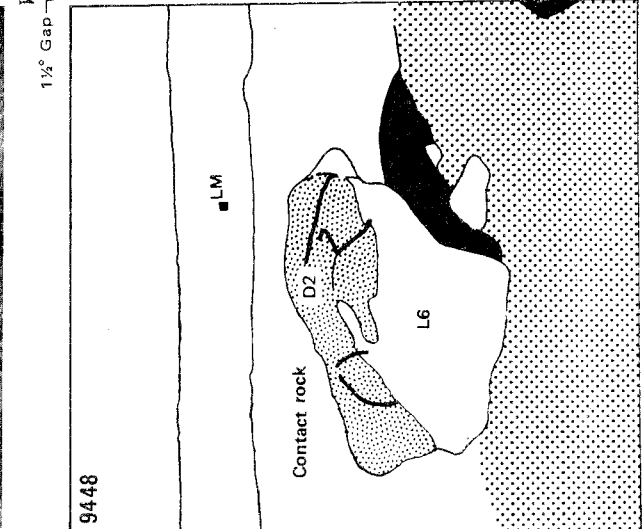
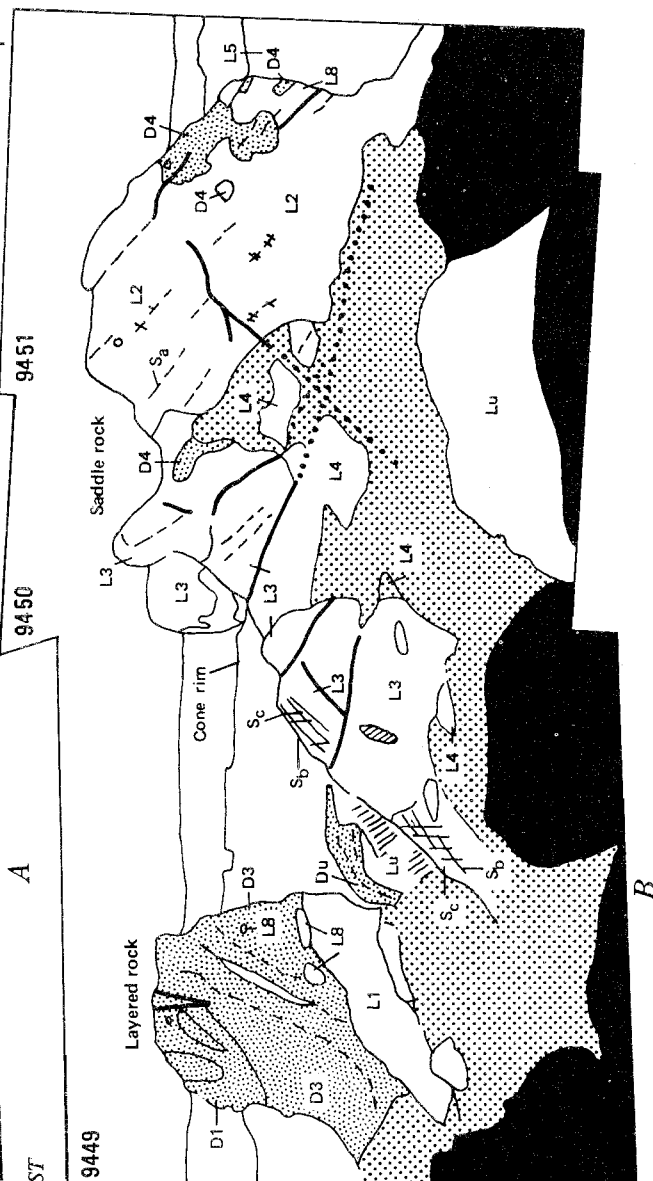
Comparison with other rocks in area: Appears similar

Probable origin: Cone crater ejecta reejected from 30-m crater

Sample 14069

Size: 4×3×2.5 cm; 24.87 g

Color: Medium light gray



EXPLANATION

ROCK MATERIALS



Light-toned rocks and clasts (L1-L8)
See table 3 for description



Dark-toned rocks and clasts (D1-D4)
See table 3 for description



Fine-grained material

STRUCTURAL SURFACES



Bedding



Fracture set
Other sets labeled S_c



Fracture
Commonly curved; apparently randomly oriented. Dotted where inferred

9452

Last four digits of NASA photograph number

FIGURE 44.—White rocks group. A, Appearance of light and dark rock materials. (NASA photographs ASI4-68-9448 to 9451.) B, Diagram showing distribution of rock types and structures (Swann and others, 1971).

Shape: Blocky, subrounded
Fillet: Area too disturbed to discern
Apparent burial: Area too disturbed to discern
Dust cover: Area too disturbed to discern
Comparison with other rocks in area: Appears similar
Probable origin: Cone crater ejecta reejected from 30-m crater

Sample 14070
Size: 4.2×3×2 cm; 36.46 g
Color: Medium light gray
Shape: Blocky, subangular
Fillet: Area too disturbed to discern
Apparent burial: Area too disturbed to discern
Dust cover: Area too disturbed to discern
Comparison with other rocks in area: Appears similar
Probable origin: Cone crater ejecta reejected from 30-m crater

Sample 14071
Size: 2×0.8×0.5 cm; 2.16 g
Color: Light gray?
Shape: Slabby, angular
Fillet: Area too disturbed to discern
Apparent burial: Area too disturbed to discern
Dust cover: Area too disturbed to discern
Comparison with other rocks in area: Appears similar
Probable origin: Cone crater ejecta reejected from 30-m crater

Sample 14072
Size: 4.1×3.4×2.1; 45.06 g
Color: Medium light gray
Shape: Blocky, subrounded
Fillet: Area too disturbed to discern
Apparent burial: Area too disturbed to discern
Dust cover: Area too disturbed to discern
Comparison with other rocks in area: Appears similar
Probable origin: Cone crater ejecta reejected from 30-m crater

14082, 14083 (SAME ROCK, BROKEN)
(FIGS. 59, 60)

Station: C1 (White Rocks area)
Location: 1.24 km ENE of LM and 17 m SE of Cone crater rim
Rock type: Felsic breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Gentle slope to the south
Fragment population: Derived from Cone crater
Distribution and size range: Abundant from limit of resolution to 3 m
Color: Very light gray, almost white, to medium gray
Shapes: Irregular with subrounded to rounded edges, parallel fracture sets; knobby
Fillets: Generally well developed; a few poorly to moderately developed
Dust cover: Moderately heavy
Fines:
Color: Nearly white to brownish gray
Compaction: Moderately loose
Craters: None discernible
Ejecta: Essentially all of the materials are ejecta from Cone crater

SAMPLE CHARACTERISTICS

Samples 14082 and 14083
Size: Sample 14082: 6×3.6×2 cm; 61.16g
Sample 14083: 3.2×1.5×2.2 cm; 13.37 g
Color: Very light gray
Shape: Blocky, subangular
Fillet: Moderately well developed on boulder from which samples were taken

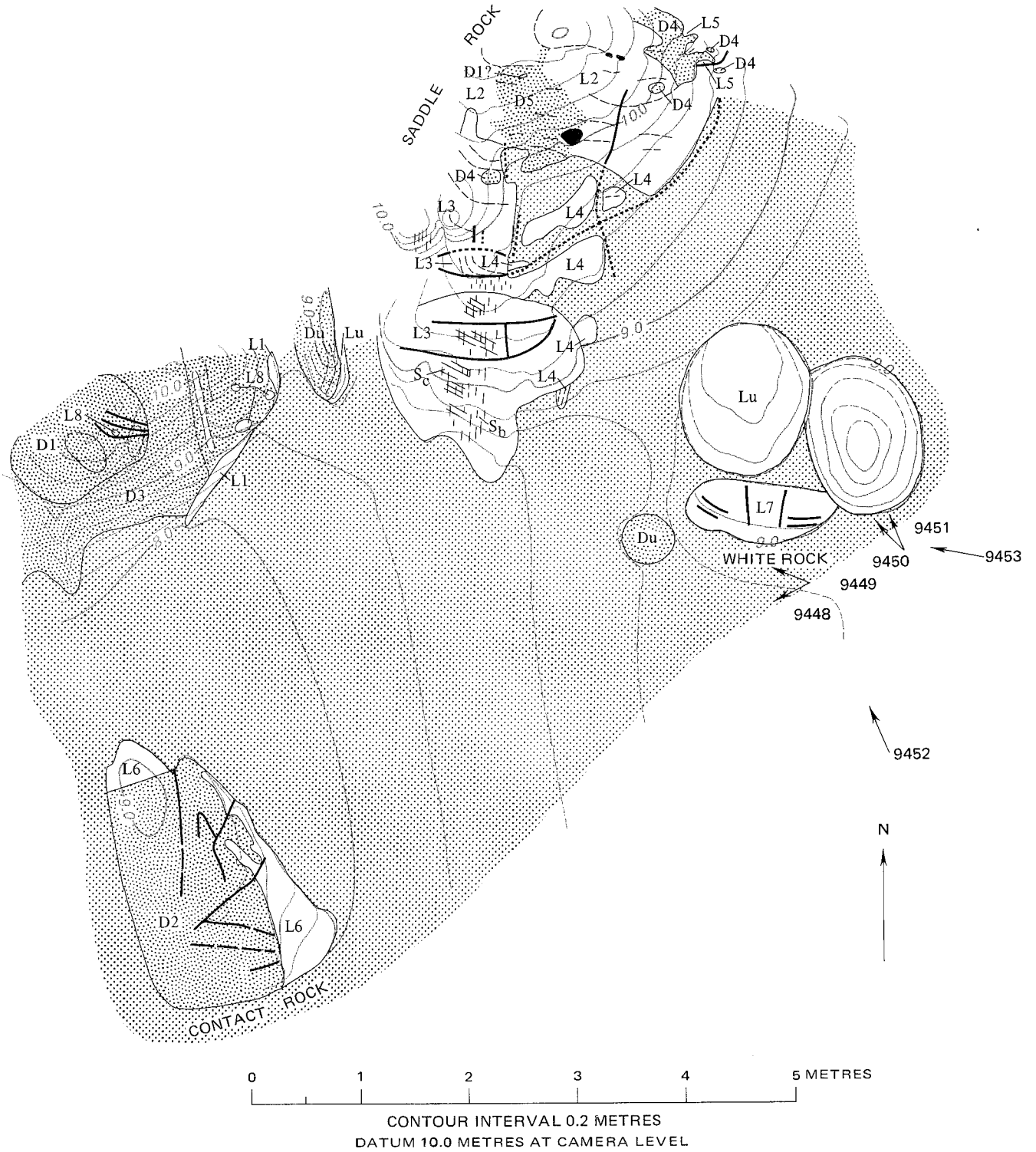





FIGURE 45.—Geologic map of the White rocks area. (Compiled from NASA photographs AS14-68-9448, 9449.) (Swann and others, 1971.) See table 3 for explanation of letter symbols. Explanation on opposite page.


EXPLANATION

ROCK MATERIALS


 Dark-toned rocks and clasts (D1-D4)
See table 3 for description


 Light-toned rocks and clasts (L1-L8)
See table 3 for description


 Fine-grained material


 Loose fragments


STRUCTURAL SURFACES

 Contact between rock types

 Bedding

 Fracture sets
S_c S_b

 Fracture
Commonly curved; apparently randomly oriented. Dotted where inferred

 9452
Base of arrow shows camera position; arrow shows direction camera was pointed

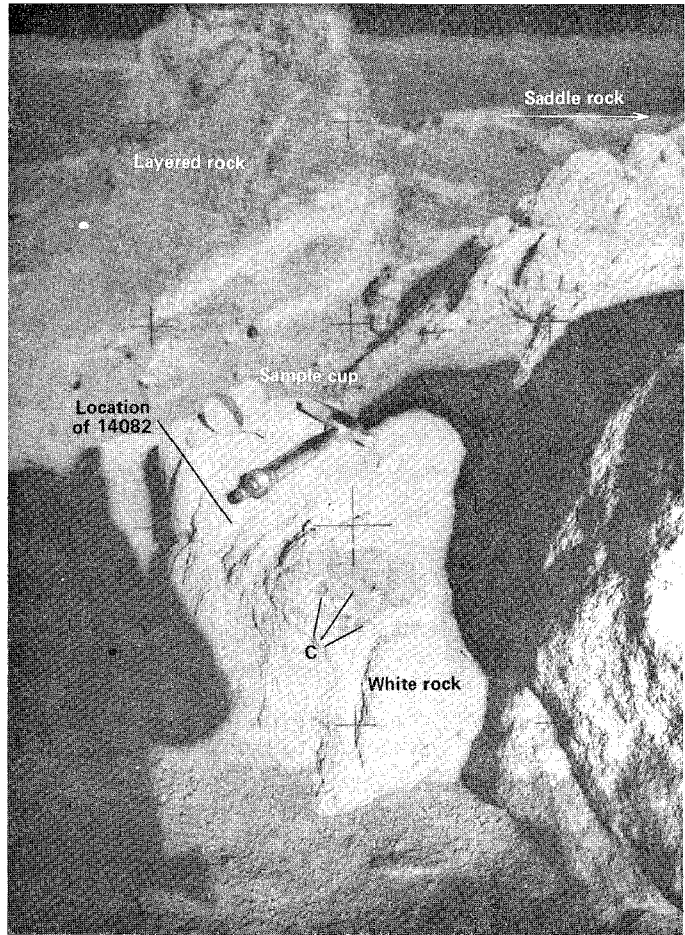


FIGURE 46.—White rock in the White rocks group. Sample 14082 was taken from just below the near end of hammer handle. Large dark clasts (C) in center of near end of White rock. Compare with figures 59 and 60. (NASA photograph AS14-68-9453.)

Apparent burial: Boulder from which samples were taken buried approximately ¼

Dust cover: Slight

Comparison with other rocks in area: Appear representative of boulder from which they were taken. May be similar to white portions of other boulders

Probable origin: Cone crater ejecta from the Fra Mauro formation

Comments: Fines generally have lower albedo than the rocks in the sample area

14301, 14313 (FIGS. 61, 62, 63)

Station: G1
Location: 150 m east of LM on north rim crest of North Triplet Crater
Rock type: Coherent clastic breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Level
Fragment population:
Distribution and size range: Moderately abundant from limit of resolution to 15 cm
Color: Medium gray

Shapes: Tabular; angular to rounded on exposed surfaces
Fillets: Moderately to well developed
Apparent burial: ⅓-¾
Dust cover: Heavy

Fines:
Color: Medium gray
Compaction: Moderately firm

Craters:
Distribution and size range: Abundant from 5-70 cm
Shape: Subdued
Ejecta: Many of the fragments are probably associated with the small craters that have reejected material from North Triplet crater

SAMPLE CHARACTERISTICS

Sample 14301
Size: 12.5×12×8 cm; 1360.6 g

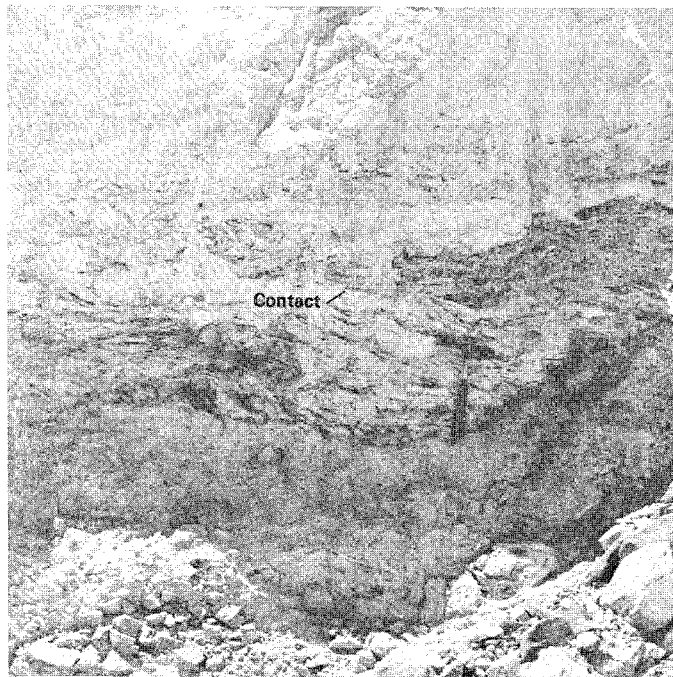


FIGURE 47.—Layering in uppermost parts of the ejecta sequence at Meteor Crater, Arizona. Photograph courtesy of J. F. McCauley.

Color: Medium to light gray

Shape: Subangular to subrounded; blocky equant; subrounded on exposed surfaces

Fillet: Moderately well developed

Apparent burial: $\frac{3}{4}$

Dust cover: Heavy

Comparison with other rocks in area: Similar

Probable origin: North Triplet crater

Comments: Excepting samples dug from trenches, 14301 is probably the most deeply buried rock sampled on this or previous missions

Sample 14313

Size: 6×6×4 cm; 144 g

Color: Medium light gray

Shape: Blocky; angular to subrounded; relatively flat on exposed top

Fillet: Poorly developed

Apparent burial: $\frac{1}{2}$

Dust cover: Moderate to heavy

Comparison with other rocks in area: Appears similar to most surrounding fragments

Probable origin: North Triplet crater

14304 (FIGS. 64, 65)

Station: No station number; EVA 1

Location: 80 m NW of LM on SW rim of 10-m crater

Rock type: Moderately coherent clastic breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Slight slope to south

Fragment population:

Distribution and size range: Sparse from limit of resolution to 20 cm

Color: Light gray

Shapes: Irregular, knobby, subrounded on exposed surfaces

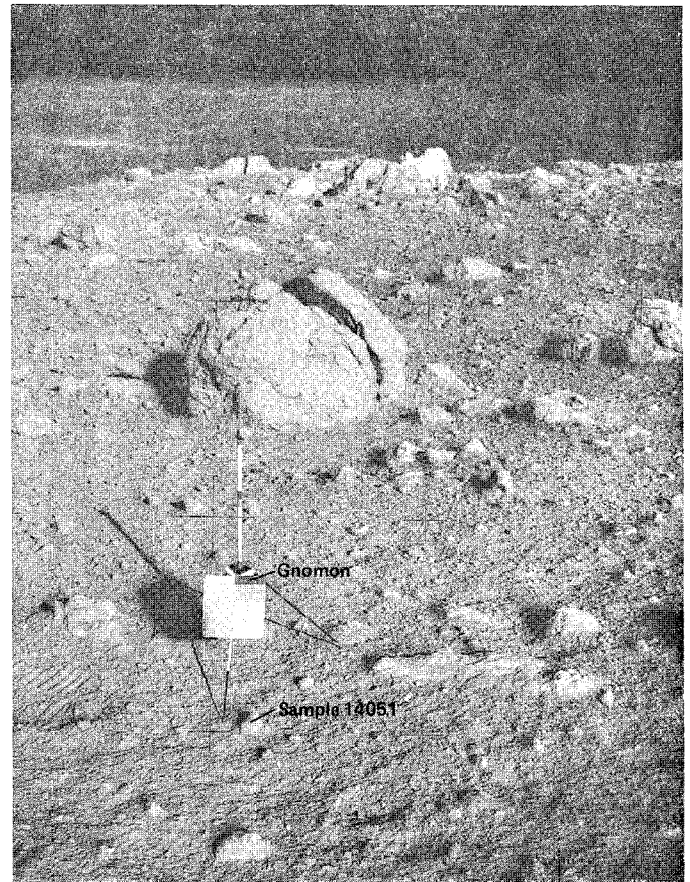


FIGURE 48.—Split rock at station C' just beyond gnomon. The near horizon is the south rim of Cone crater. Note White rocks group near rim. (NASA photograph AS14-68-9445.)

Fillets: Poorly developed

Apparent burial: $\frac{1}{8}$ – $\frac{1}{4}$

Dust cover: Moderate

Fines:

Color: Medium gray

Compaction: Moderate; upper 2 cm powdery

Craters:

Distribution and size range: Abundant from a few centimetres to 50 cm

Shape: Subdued

Ejecta: Larger fragments (including 14304) appear to be associated with 30- to 50-cm craters

According to Cdr. Shepard's comments, samples 14304 and 14305 were picked up near the southwest rim of a sharp 10-m crater which had been described earlier from the LM by Astronaut Mitchell. The 10-m crater is not shown in the sample documentation photographs and it is not clear that these rocks are part of the ejecta from that crater

SAMPLE CHARACTERISTICS

Sample 14304

Size: 20×11×10 cm; 2498.9 g

Color: Medium grayish brown

Shape: Blocky, subrounded

Fillet: Poorly developed

Apparent burial: $\frac{1}{8}$ – $\frac{1}{4}$

TABLE 4.—Sample locations and page references by sequential LRL number

LRL Sample No.	Traverse station	Page reference
14901 to 14012	Contingency sample	50
14041 to 14046	A	42, 53
14047 and 14048	B	4, 42, 54
14049 and 14050	Bg	54
14051 and 14052	C ⁺	4, 43, 54
14053 and 14054	C2	4, 29, 30, 43, 55
14055 to 14062	E	4, 56
14063 to 14065	Cl	55
14066 and 14067	F	4, 56
14068 to 14072	C'	29, 30, 43, 45, 54
14073 to 14079	G	4, 58
14080 and 14081	G	58
14082 to 14084	Cl	33, 45, 47, 55
14140 to 14143	C'	54
14144	C'	54
14145 to 14148	G	57
14149 to 14152	G	58
14153 to 14156	G	58
14160 to 14163	Bulk sample	22, 25, 52
14165 to 14189	Comprehensive sample collected on EVA-1	50
14190 to 14204	Not known, residue from weigh bag 1031, EVA-2.	61
14210 and 14211	A	52
14220	G	56
14230	G	57
14240	G	58
14250 to 14289	Comprehensive sample	50
14290 to 14297	Probably station H residue from weigh bag 1038, EVA-2.	61
14301	Gl	4, 47, 48, 59
14302	Included with 14305, EVA-1	49
14303	Comprehensive sample?	4, 50, 51
14304	EVA-1	4, 48, 49, 51
14305	EVA-1	4, 30, 31, 49, 51
14306	G	4, 49, 59
14307	G	4, 59
14308	Dg, included with 14311	4, 61
14309	Not known, probably broken from EVA-2 grab sample.	
14310	G	4, 58
14311	Dg	4, 56
14312	H	4, 32, 60, 61
14313	Gl	4, 30, 47, 48, 59
14314	H	60, 65, 67
14315	H	4, 60, 75, 76
14316	H	60
14317	H	60
14318	H	4, 30, 60, 75, 76
14319	H	4, 32, 60, 61, 65
14320	H	60, 75, 77
14321	Cl	4, 55, 78, 79
14411	A, core bit	53
14414	G, core bit	56, 57
14421	Comprehensive sample	50
14422 to 14453	Bulk sample	52

Dust cover: Moderate

Comparison with other rocks in area: Appears similar in texture and albedo

Probable origin: Lack of fillet and association with two small fresh craters suggests it has been in its present position for very short time. If 14304 made the two craters as suggested in figure 64, its source was probably from the southeast

14305 (14302 FRAGMENT OF SAME ROCK)
(FIGS. 66, 67)

Station: No station number; EVA 1

Location: 80 m NW of LM and 100 m ESE of ALSEP central station.

Rock type: Coherent clastic breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Level regolith surface

Fragment population:

Distribution and size range: Fairly abundant from limit of resolution up to 1 cm; sparse from 1 to 15 cm

Color: Medium gray

Shapes: Angular to subrounded, fractured

Fillets: Poorly developed

Apparent burial: 1/4-1/3

Dust cover: Moderate

Fines:

Color: Medium gray

Compaction: Medium

Craters:

Distribution and size range: Abundant moderately fresh craters from 10 to 50 cm

Shape: Sharp to subdued

Ejecta: Fresh 20-cm crater is rimmed with clods

See comment relating to sample 14304

SAMPLE CHARACTERISTICS

Sample 14305 (14302)

Size: 14x15x10 cm; 2497.5 g

Color: Medium gray

Shape: Subrounded to angular; blocky; pyramidal

Fillet: None

Apparent burial: 1/3

Dust cover: Moderate

Comparison with other rocks in area: Largest fragment in photographs; shape and texture similar to smaller fragments

Probable origin: Lack of fillet and freshness of secondary crater suggests it has been in its present position for very short time.

Direction of sliding after making secondary (fig. 33) suggests its source was from the southwest

14306 (FIGS. 68, 69)

Station: G

Location: 230 m ESE of LM and 50 m E of North Triplet rim crest

Rock type: Coherent clastic breccia

SAMPLE AREA CHARACTERISTICS

Slopes: Level regolith surface

Fragment population:

Distribution and size range: Sparse from limit of resolution to 60 cm

Color: Medium light gray

Shapes: Irregular to sub-tabular

Fillets: Moderately well developed

Apparent burial: 1/8-1/3

Dust cover: Moderate on smaller fragments; heavier on 60-cm boulder

Fines:

Color: Medium light gray

Compaction: Moderate to high

Craters:

Distribution and size range: Moderate abundance of 20- to 50-cm craters

Shape: Subdued

Ejecta: Not discernable

SAMPLE CHARACTERISTICS

Sample 14306

Size: 5x7.5x6 cm; 584.5 g

Color: Light gray with white clasts

Shape: Blocky, subangular

Fillet: None

Apparent burial: 1/4-1/3

Dust cover: Low to moderate

Comparison with other rocks in area: Appears somewhat more tabular and less irregular than 60-cm boulder but similar in color and albedo. Planar structures and flat near face similar to boulder

TABLE 5.—Cross-reference of lunar samples with locations, lunar-surface photographs, status of determining sample location and orientation, megascopic sample description, and comments by the astronaut crew during sample collection

Sample Number	Weight (g)	Lunar-surface Photographs: ^{1,2}	Location Status	Ori-entation ³	Sample description ⁴	Crew comments ⁵
EVA 1—Station: LM Area Toward ALSEP Site:						
		65-9206 LM Pan B 66-9325 LM Pan A 66-9339 LM Pan A	Approx.	NA	Contingency sample	LMP: Houston. While Al's getting that television, I'll go ahead and get my contingency sample out of the way. The contingency sample is being taken about 25 feet to the 0100 position of the LM, adjacent to about a 5-foot crater. I'll identify it for you later. ***
14001	31.8				2-4 mm fines	
14002	42.1				1-2 mm fines	
14003	947.9				<1 mm fines	
14004	33.0				4-10mm fines	
14006	12.13				rock	CDR: The soil is very fine here. Very fine grain, and as we mentioned before there are very few samples that are of any size at all. Mostly hand-sample size and rocks of generally 1 or 2 inches or less. ***
14007	3.67				rock chip	
14008	4.35				rock chip	
14009	1.09				rock chip	
14010	1.00				rock chip	
14011	0.68				rock chip	
14012	0.103				residue from weigh bag 1039	LMP: We couldn't get them all in *** the SRC. We got the contingency sample here. And it so happens that the material cracked on the contingency sample bag, and it's leaking. So we're putting it in the weigh bag [No. 1039] with these other rocks. [The small rocks from the comprehensive sample area] And the weight of that total combination is 5 pounds. CDR: Okay, Houston, on this comprehensive sample we're about a third of the way back to the LM. I've not found an area exactly what I want, so I have drawn a circle which is approximately 2 metres in radius, and I'm going to pick the surface rocks from that, and sample the surface fines from that area. CDR: I've documented this location with a locator shot back to the LM and to the ALSEP. (AS14-67-9388, 9389) LMP: Okay, Al. Need some help there? CDR: Yes, I wanted to pick up all the walnut-size rocks in your tongs. And we'll get the surface fines, here. CDR: Why don't you work that side of it, and I'll work this side. LMP: Okay. CDR: You have to be careful you don't put them in the ground. If you make consecutive passes up the whole circle we can tell. *** CDR: For this amount of time, we can really only get the ones that are essentially there. LMP: Yes, let me grab another weigh bag, because you're too far away for me to— CDR: An inch in diameter. *** LMP: Can't help you very well this way. *** CDR: I think I've got them, Ed. LMP: Okay. I'll get one for the fines. CDR: Get one for the fines and we'll start. I'd just say, just grab an undisturbed site out of reach quadrant, we didn't hit with our feet. Cut it down to about a centimetre level and fill the bag that way. LMP: Okay. You want the medium-size scoop or the big scoop for this? CDR: No, the medium-size scoop is the best. All you've got to do is cut the surface to the depth of about a centimetre in an undisturbed area here where we haven't picked up the rocks. Okay? LMP: Okay. I'm bringing the stuff over right now. CC: Al and Ed this is Houston. We show about 8 minutes remaining until you should be at the MESA [Modularized Equipment Storage Assembly, a storage area of the exterior of the Lunar Module] to start closeout. CDR: Okay, we will be able to bring the comprehensive sample at that time. *** LMP: Hey, don't close it, here's one in here for that. [larger rock?] LMP: Here's one in here I picked up. CDR: Oh, okay. Dump it in here, then. [possibly refers to sample 14303?] LMP: Okay, I'll start over here in this undisturbed area. CDR: Yes, just get that area and then right here in this area. And fill up the bag to the line. Now I'll head on back a little farther, get a football-size rock. *** LMP: All right, let me get about three more scoops, Al. I can get there before long. *** LMP: Boy, my sample's packing down. It was more than that when I left the site. *** LMP: Oh, There went my sample bag.
		67-9388 USB 67-9389 DSB	Approx.	NA	Comprehensive sample	
14165	9.10				<1 mm fines residue	
14166	20.50				1-2 mm fines from	
14167	26.50				2-4 mm fines weigh bag	
14168	43.90				4-10mm fines 1027	
14169	78.66				rock	
14170	26.34				rock	
14171	37.79				rock	
14172	32.10				rock	
14173	19.59				rock	
14174	11.62				rock chip	
14175	7.48				rock chip	
14176	1.12				rock chip	
14177	2.32				rock chip	
14178	2.88				rock chip	
14179	3.03				rock chip	
14180	4.75				rock chip	
14181	2.48				rock chip	
14182	2.29				rock chip	
14183	1.40				rock chip	
14184	1.48				rock chip	
14185	1.52				rock chip	
14186	1.26				rock chip	
14187	1.09				rock chip	
14188	1.60				rock chip	
14189	0.36				residue, weigh bag 1027 comprehensive sample (weigh bag 1039)	
14250	4.06				rock chip	
14251	1.51				rock chip	
14252	0.86				rock chip	
14253	1.23				rock chip	
14254	1.01				rock chip	
14255	22.15				rock	
14256	13.71				4-10mm fines	
14257	30.48				2-4 mm fines	
14258	64.33				1-2 mm fines	
14259	2694.10				<1 mm fines	
14260	282.50				<1 mm fines	
14261	8.20				2-4 mm fines	
14262	9.10				1-2 mm fines	
14263	16.20				4-10mm fines	
14264	117.89				rock	
14265	65.79				rock	
14266	6.95				rock chip	
14267	54.77				rock	
14268	23.12				rock	
14269	17.19				rock	
14270	25.59				rock	
14271	97.41				rock	
14272	46.63				rock	
14273	22.40				rock	
14274	15.18				rock	
14275	12.46				rock	
14276	12.75				rock	
14277	7.59				rock chip	
14278	7.60				rock chip	
14279	5.67				rock chip	
14280	6.20				rock chip	
14281	12.03				rock	
14282	1.89				rock chip	
14283	1.25				rock chip	
14284	1.47				rock chip	
14285	2.23				rock chip	
14286	4.42				rock chip	
14287	1.07				rock chip	
14288	3.44				rock chip	
14289	0.20				residue, weigh bag 1039	
14298	200.00				<1 mm fines reserve from	
14299	225.00				<1 mm fines 14259	
14300	4.06				rock chip	
14421	260.90				reserve fines from unsieved comprehensive sample	

See footnotes at end of table.