

TABLE 8

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES, AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: ALSEP					
		DEEP DRILL	TELEVISION DOCUMENTATION ONLY	05 01 25 36	OKAY, STARTING ON THE DEEP DRILL.
60007	105.7	(TOP)		05 01 25 46	MARK. THAT ONE WENT IN LIKE GANGBUSTERS!
60006	165.6			05 01 25 51	OKAY, TONY; I HAD A TOUGH TIME GETTING THE BIT OFF THE FIRST STEH. GOT A LITTLE DUSTY IN THERE, BUT I GOT IT CLEANED OUT.
60005	76.1			05 01 29 21	THE PROBLEM IS THAT THE BIT WON'T STAY STUCK IN THE GROUND, AND WHEN I TRY TO GET THIS STUFF ON, IT SPINS THE WHOLE DEAL INSTEAD OF THE --
60004	202.7			05 01 31 56	OKAY, SECOND ONE GOING IN, TONY.
60003	215.5	(BIT)		05 01 33 19	OKAY, LAST ONE GOING ON, TONY.
60002	211.8	(BOTTOM)		05 01 33 24	BOY, THAT'S ALL THE SECTIONS ARE LIKE THAT FIRST ONE, PULL IT - RIGHT OUT OF THE GROUND. BUT I DON'T THINK THAT'S TRUE.
60001	30.1			05 01 33 32	LEM, TONY.
		INSERTED IN PAIRS:		05 01 33 33	
		STEM WAS BROKEN		05 01 34 16	
		BETWEEN 3RD AND		05 01 36 47	
		4TH SECTIONS FOR		05 01 37 04	
		RETURN TO EARTH		05 01 38 19	
				05 01 38 21	
				05 01 38 38	
				05 01 39 44	
				05 01 41 52	
				05 01 44 04	
				05 02 28 56	
				05 02 29 02	
				05 02 29 06	
				05 02 29 43	
				05 02 29 54	
				05 02 30 14	

BAG #
60095*

BLACK GLASS BALL
TELEVISION
DOCUMENTATION
ONLY

05 01 53 19	LMP	WAIT A MINUTE. I GOT THE MOST BEAUTIFUL THING HERE. I GOT TO PICK THIS UP - BEFORE I LOSE IT. LET ME PUT THIS OVER HERE.
05 01 54 14	LMP	---
05 02 24 57	LMP	DID YOU SEE WHAT I HELD JUST IN FRONT OF THE CAMERA, TONY?
05 02 25 04	LMP	IT WAS A SOLID PIECE OF GLASS, SPHERICAL AND PART OF IT'S BROKEN AWAY, BUT IT REALLY MOST UNIQUE PIECE OF GLASS I'VE SEEN IN ALL THE SAMPLES.
05 02 25 33	LMP	IT'S A SOLID PIECE OF GLASS.
05 02 25 42	LMP	AND IT WAS RIGHT OUT HERE BY THE DRILL.
05 04 09 40	LMP	OKAY, TONY, I'M GONNA PUT THAT LITTLE GLASS BALL - THAT I HAVEN'T SACKED YET - LOOK AT THAT, JOHN.
05 04 09 52	CDR	YEAH, IT IS A BIG PIECE OF GLASS. (FROM ALSEP SITE)
05 04 09 53	LMP	SOLID GLASS.
05 04 09 55	CDR	BLACK GLASS.
05 04 09 57	LMP	GOING INTO BAG - 4.
05 04 10 27	CDR	WE GOT TO DO SOMETHING WITH THIS BAG BEFORE WE LEAVE, CHARLIE.
05 04 10 43	LMP	PUT IT UNDER YOUR SEAT. UNDER MY SEAT.

BAG 351
60035*

ROCK (8)
114-18383 XSB
114-18384 XSB

05 02 37 02	LMP	OKAY, TONY. I'M GOING TO GET A COUPLE OF GRAB SAMPLES OUT HERE IN FRONT OF THE ROVER ABOUT 15 FEET. LOOK LIKE TYPICAL ROCKS THAT ARE IN THIS AREA. THEY'RE MOSTLY DUST COVERED HERE, BUT I CAN PICK UP A COUPLE THAT ARE WHITISH, AND I'LL GET A COUPLE OF CROSS-SUNS BEFORE.
05 02 40 55	CDR	I CAN'T BELIEVE HOW FULL OF HOLES THIS PLACE IS - A GENERAL COMMENT. YOU GOT THE CAMERA, CHARLIE?
05 02 41 02	LMP	NO, IT'S ON THE CENTRAL STATION.
05 02 41 15	LMP	OKAY, BAG 351 HAS GOT A GRAB SAMPLE. AND I WON'T TAKE AN AFTER.
05 02 41 43	LMP	---
		MY FIRST ROCK - EVEN THOUGH I HAD TO FALL DOWN TO GET IT.

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AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: ALSEP					
BAG 355 60050*		SCOOPED SOIL	114-18385 XSA 114-18386 XSA 114-18387 LOC 114-18388 LOC	05 02 44 15	LMP I'M GOING OVER TO THIS CRATER AND GET YOU SOME OF THIS WHITE SOIL. I THINK IT IS COMING OFF OF THIS ROCK HERE, BUT IT LOOKS LIKE CALICHE. I NEVER THOUGHT I'D USE THAT WORD UP HERE, BUT THAT'S WHAT THE COATING LOOKS LIKE. COME AND LOOK AT IT, JOHN. IT MIGHT BE JUST A TOTAL WHITE ROCK; THE CROSS SUN, OH, MAN, ARE YOUR SETTINGS GOING TO BE TERRIBLE. GET A LITTLE SHOVELFUL OF THAT STUFF. GOSH, CHARLIE, IT DOES LOOK LIKE CALICHE. DOESN'T IT LOOK LIKE CALICHE? YEAH, BUT IT'S JUST A BUNCH OF WHITE FRAGS, I BELIEVE.
				05 02 44 35	LMP I'M GOING TO GET THIS ROCK HERE, TCO. PUT THAT IN THERE? NO, GO AHEAD, I'LL GET ANOTHER BAG FOR THAT. OKAY, THAT - SAMPLE OF WHITE MATERIAL IS GOING IN BAG 355.
				05 02 45 15	LMP
				05 02 45 25	CDR
				05 02 45 27	LMP
				05 02 45 28	CDR
				05 02 45 33	LMP
				05 02 45 36	CDR
				05 02 45 37	LMP
				05 02 45 49	CDR

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: ALSEP					
BAG 373 60075*		ROCK	SAME AS BAG 355	05 02 46 28	LMP OKAY, TONY. IT'S A WHITE MATRIX IN THIS ROCK WITH SOME CLASTS - IT'S A ONE-ROCK BRECCIA. ONE OF THE CLASTS JUST FELL OUT. BUT IT REALLY LOOKS LIKE A CALICHE MATRIX. SORT OF FRIABLE.
				05 02 47 28	LMP OKAY. THIS WHITE ROCK - THAT I PICKED UP IS IN BAG 373.
				05 02 50 29	CDR THAT BIG ROCK RIGHT THERE IS A BRECCIA-LOOK AT ALL THOSE CLASTS IN THERE.
				05 02 50 33	LMP I KNOW IT - MOST OF THEM IN HERE ARE BRECCIAS. I PICKED UP ONE.
				05 02 50 40	LMP
				05 02 50 43	CDR YEAH, THAT'S ABOUT A TWO-ROCK BRECCIA THERE. THOSE ROCKS THAT YOU COLLECTED; WERE THEY ALL BRECCIAS, OR COUL YOU TELL?
				05 03 04 23	CC I'M NOT SURE, TONY. I THINK THEY WERE BRECCIAS, BUT THEY WERE SORT OF REALLY DUST COVERED, SO I COULDN'T TELL YOU, REALLY.
				05 03 04 32	LMP

EVA 1 - STATION: 1

BAG 372
61510*

RAKE FRAGMENTS

109-17794 DSB	05 03 29 02	LMP	WE'RE GOING UP TO WHERE IT'S MORE COBBLY, TONY, TO GET THE RAKE SAMPLE. IT'S PRETTY SMOOTH RIGHT HERE.
114-18389 XSB			
114-18390 XSB			
114-18391 XSB	05 03 29 18	CC	OKAY, THE RAKE SAMPLE SHOULD BE ONE CRATER DIAMETER AWAY FROM PLUM.
114-18392 XSA	05 03 29 25	CC	AND IT DOESN'T HAVE TO BE TOO COBBLY THERE.
114-18393 XSA	05 03 29 29	LMP	OKAY, THIS IS ABOUT IT THEN.
114-18394 XSA	05 03 29 35	CDR	YEAH, BUT I DON'T THINK ANY OF - THE ROCKS FROM HERE MAY HAVE COME FROM PLUM, BUT THEY MAY BE SOME OTHER PLACE, TOO.
109-17795 LOC			HOW ABOUT RIGHT OUT THERE, IN MY SHADOW? THERE'S SOME RIGHT THERE THAT MIGHT BE -
	05 03 29 49	CDR	I'M SURE GOING TO GET THEM.
	05 03 29 55	CDR	
	05 03 30 03	CDR	RIGHT HERE, CHARLIE?
	05 03 30 05	LMP	YEAH, THAT'S FINE.
	05 03 30 40	LMP	THERE'S THE LOCATOR. AND WE'LL START THE OLD RAKE, FOR THE FIRST TIME. GET THAT BEAUTY RIGHT THERE. LOOK AT IT COME THROUGH THAT REGOLITH, WOULD YOU?
			MOVE OUT AND LET'S GET AROUND OUT OF THE WAY THERE ANOTHER RAKE.
	05 03 31 38	LMP	HEY, MAN, I'M LOSING ALL OF THOSE.
	05 03 32 24	LMP	
	05 03 32 26	CDR	YEAH.
	05 03 32 27	LMP	THERE'S THREE LITTLE ONES, NOW.
	05 03 32 36	CDR	YEAH, BETTER GET ANOTHER ONE.
	05 03 32 54	CDR	THERE'S A PRETTY GOOD ONE.
	05 03 32 57	LMP	JOHN, THERE'S A GLASSY ONE RIGHT THERE. I CAN'T TELL WHAT THE OTHER ONES ARE.
			I CAN'T EITHER. THEY'RE ALL DUST COATED.
	05 03 33 02	CDR	OKAY, TONY, WE GOT ABOUT A HALF A SACKFUL GOING IN BAG -
	05 03 33 12	LMP	
	05 03 33 22	LMP	372 WITH THREE RAKES.
	05 03 33 30	LMP	AND THERE WERE LOTS OF SMALLER ONES, BUT THEY GOT - MORE SMALLER ONES BUT THEY FELL THROUGH THE TIMES.

BAG 354

61120*
(61500)

RAKE SOIL
(LML NUMBER HAS
BEEN CHANGED BY
CURATOR TO 61500)

109-17794 DSB	05 03 34 15	LMP	OKAY, JOHN, IF YOU'LL STEP ASIDE, I'LL GET A SOIL SAMPLE.
114-18395 XSA			THAT'S ABOUT A KILO. ONE MORE SCOOPFUL?
109-17795 LOC	05 03 34 54	LMP	YEAH. A LITTLE ONE.
	05 03 34 56	CDR	
	05 03 34 59	LMP	OKAY.
	05 03 35 02	LMP	ROCK.
	05 03 35 06	CDR	ALMOST LOOKS LIKE BLACK SOIL.
	05 03 35 10	LMP	OKAY. MAN, IT'S REALLY SOFT HERE, TONY ON THE RIM. YOU DON'T SINK FAR, BUT WHEN YOU WALK ON IT, IT GETS VERY -
	05 03 35 40	LMP	OKAY, THIS IS 354. GOING IN BAG 354, HOUSTON.
	05 03 35 58	LMP	WE OUGHT TO START FROM HERE. JOHN, AND DO A RADIAL. SAMPLING IN TOWARDS PLUM.

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SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: 1					
BAG 371		4 ROCKS			
61155*			109-17796 DSB	05 03 37 42	LMP WHAT ARE YOU PICKING UP? THAT LITTLE OLD THING?
61156*			114-18396 XSB	05 03 37 45	CDR CHARLIE, THAT'S AS GOOD AS ANY OF THEM.
61157*			114-18397 XSB	05 03 37 47	LMP IT LOOKS LIKE IT IS CONNA COME APART, THOUGH, TO ME.
61158*			114-18398 XSA		
			109-17797 LOC	05 03 37 52	CDR IT MIGHT. THERE'S THREE OR FOUR SAMPLES RIGHT THERE WE CAN GET.
				05 03 37 57	LMP I'LL GET THESE IN THE SHOVEL.
				05 03 38 02	CDR OKAY.
				05 03 38 04	LMP IF YOU DON'T GET OUT OF THAT - IF YOU DON'T GET THAT THING IN THE -
				05 03 38 16	CC OKAY, ARE ALL OF THESE ROCKS LOOKING PRETTY MUCH THE SAME?
				05 03 38 21	LMP THEY ARE ALL COVERED, TONY.
				05 03 38 27	LMP - - -
				05 03 38 41	CDR THEY'RE ANGULAR.
				05 03 38 43	LMP ALL ANGULAR, THOUGH, I'LL TELL YOU THAT. HERE'S ONE WITH A WHITE STREAK, LOOKS LIKE A CALICHE STREAK THROUGH IT. LEAVE IT. THAT'S ALL; IT'S A WHITE ROCK.
				05 03 39 05	LMP YOU HAVE FOUR SAMPLES, JOHN. IS THAT GOOD ENOUGH?
				05 03 39 08	CDR YEAH. THAT'S IN BAG 371.

BAG 363		SOIL	109-17796 DSB	05 03 39 25	LMP HEY, WAIT A MINUTE; WE NEED A SOIL FROM THERE.
61500*		(LRL NUMBER HAS BEEN CHANGED BY CURATOR TO 61140)	114-18399 XSA		
			109-17797 LOC	05 03 40 17	CDR THAT'S GOING IN BAG 363.

BAG 364		ROCK			
61175*			109-17798 DSB	05 03 40 45	LMP OKAY. HERE'S ONE RIGHT HERE, JOHN, THAT'LL MAKE A GOOD ONE. SEE THAT ONE RIGHT THERE BY THAT FOOTPRINT? THAT'S A GOOD SAMPLE SIZE. ABOUT 5 CENTIMETERS ACROSS?
			114-18400 XSB		
			114-18401 XSB		
			114-18402 XSA		
			114-18403 XSA		
				05 03 41 02	CDR THAT ONE RIGHT?
				05 03 41 04	LMP NO, THAT ONE RIGHT HERE TO THE RIGHT OF MY SHADOW. SEE, RIGHT THERE. LET ME SHOW YOU.
				05 03 41 10	CDR RIGHT THERE.
				05 03 41 16	LMP OKAY. IT'S AN ANGULAR SUBANGULAR ROCK, HOUSTON. 5 CENTIMETERS. I CAN SEE SOME WHITE CLAST SHINING THROUGH IT.
				05 03 41 30	CDR BET IT'S DUST COVERED AGAIN.
				05 03 41 32	LMP IT'S ALL - EVERYTHING HERE IS DUST COVERED.
				05 03 41 43	LMP GOT THAT BEAUTY.

05 03 41 56 CDR OKAY, CHARLIE.
 05 03 41 59 LMP OKAY, TONY, IT'S A WHITE MATRIX; IT'S A BRECCIA,
 LOOKS LIKE, WHITE CLAST WITH SOME GREENISH-LOOKING
 VERY SMALL MILLIMETER-SIZED PHENOCRYSTS IN A BLACK
 MATRIX.
 05 03 42 16 CDR GOES IN BAG 364, HOUSTON.

BAG 356 SOIL SAME AS
 61160 BAG 364
 109-17798 DSB OKAY. LET ME GET THAT SOIL SAMPLE.
 114-18400 XSB OKAY, COMING UP.
 114-18401 XSB
 114-18402 XSA IT'S GOING IN BAG 356, HOUSTON. SOIL SAMPLE.
 114-18403 XSA

BAG 362 ROCK 109-17799 DSB WANT TO GET SOME OF THESE HERE, CHARLIE?
 61135 245.1 114-18404 XSB YEAH, THAT'S GREAT - THAT DEFINITELY IS A BRECCIA
 WHITE-CLAST 114-18405 XSB RIGHT THERE, JOHN.
 BRECCIA 114-18406 XSA CDR YES, SEE THE CLAST IN IT.
 114-18407 XSA CDR YES.
 114-18408 XSA LMP YES.
 109-17800 ICC CDR THOSE ROCKS DON'T LOOK AS DUST COVERED AS THESE.
 UH-OH, I MISSED. WAIT A MINUTE.
 05 03 46 56 LMP WELL, IT WASN'T DUST COVERED. WELL, WE MISSED IT.
 05 03 47 09 CDR MY FIRST GUESS IS IT IS A BRECCIA WITH WHITE CLAST
 IN IT. AND I SEE LINEATIONS ALL ALONG IT, IN THE
 BRECCIA. IT'S A WHITE CLAST BRECCIA IS WHAT IT IS
 I SEE NO OTHER CLAST IN IT. OF COURSE, ONCE YOU
 GET THE DIRT OFF OF IT MIGHT ALL BE WHITE. AT
 FIRST CUT, IT WOULD BE A WHITE CLAST BRECCIA.
 GOING INTO 362.

BAG 2 ROCK 05 03 47 44 LMP OKAY, TONY. THIS ONE IS A - SAME SPOT - IS A
 61195 587.9 BAG 362 BRECCIA WITH A WHITE MATRIX - IS GLASS COATED ON
 ONE SIDE AND THEN TYPICAL GLASS - LUNAR-SURFACE
 GLASS COATINGS.
 05 03 48 33 CDR OKAY, THOSE ARE BIG GLASTS, AREN'T THEY?
 05 03 48 36 LMP YES. SEE THAT GLASS RIGHT THERE, ON THE TOP?
 05 03 48 39 CDR YEAH.
 05 03 49 26 CDR THAT'S ROCK BAG 352, HOUSTON.
 05 03 49 36 CDR I TAKE IT BACK; THAT'S ROCK BAG NUMBER 2.

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AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAP-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: 1					
BAG 339		SOIL	SAME AS BAGS 362,2	05 03 50 01	LMP OKAY, SOIL SAMPLE COMING UP.
61180*			109-17799 DSB	05 03 50 23	CDR OKAY, THAT SOIL SAMPLE'S IN BAG 369, HOUSTON.
			114-18404 XSB		
			114-18405 XSB		
			114-18406 XSA		
			114-18407 XSA		
			114-18408 XSA		
			109-17800 LOC		

BAG 352		TRENCH SOIL (TOP)	109-17801 DSA	05 03 50 59	LMP NOW, JOHN! LOOK AT THAT FOOTPRINT. LOOK UNDERNEATH THAT REGGLITH. WHEN YOU KICKED THAT UP A CENTIMETER OR SO, UNDER IT IS WHITE, ABSOLUTELY WHITE, RIGHT HERE.
61240*	155.0	RESERVE FINES	114-18409 XSA		
61241	247.1	<1 MM	114-18410 XSA		
61242	17.26	1-2 MM	114-18411 XSA		
61243	13.8	2-4 MM			
61244	13.25	4-10 MM			
61245	8.25	FRAGMENT			
61246	6.05	FRAGMENT			
61247	2.48	FRAGMENT			
61248	1.71	FRAGMENT			
61249	1.17	FRAGMENT			
61255	1.13	FRAGMENT			
				05 03 51 45	LMP OKAY, TONY, LET ME DESCRIBE WHAT IT IS. THE TOP CENTIMETER OF THE REGOLITH IS GRAY, AND YOU GET DOWN UNDER THAT, AND IT'S WHITE.
				05 03 51 59	LMP ... DIFFERENT ALBEDO - THREE SHADES DIFFERENT.
				05 03 52 09	LMP I'LL DIG YOU A LITTLE TRENCH HERE. BOY, THAT'S GOING TO BE A HARD JOB, JOHN. WE'LL SAMPLE RIGHT THERE AND GET YOU A SCOOPFUL OF THIS UNDERLYING REGGLITH.
				05 03 52 30	LMP IT'S A DIFFERENT ALBEDO; IT'S AMAZING.
				05 03 52 33	CC CHARLIE, WE CAN SEE THAT HERE. WHY DON'T YOU GO AHEAD AND GET A BAG OF THE DARK AND A BAG OF THE LIGHT, AND THEN WE'LL PRESS ON TO THAT BLOCK FROM THE NORTHWEST SIDE.
				05 03 52 42	LMP ALL RIGHT.
				05 03 53 00	CDR OKAY; LET ME GET A SHOVELFUL
				05 03 53 40	CDR OF THIS, RIGHT OFF THE TOP HERE. THERE WE GO. THAT IS GOING - THAT TOP SCOOP IS GOING IN BAG 352 HOUSTON.

BAG 357		TRENCH SOIL (BOTTOM)	SAME AS BAG 352	05 03 53 57	LMP AH! TRY TO GET WAY DOWN THERE, JOHN, AND GET A -
61220*			109-17801 DSA	05 03 54 20	CDR UH-OH, WHAT? I JUST - HAD A GOOD SCOOPFUL, AND I LOST IT. LET ME DIG OUT A LITTLE - ANOTHER LITTLE TRENCH.
			114-18409 XSB	05 03 54 21	LMP THERE SHE BE. COMING UP ALL WHITE. THAT'S ALL THAT'S IN THERE, JOHN.
			114-18410 XSB		
			114-18411 XSA	05 03 55 11	CDR OKAY. AND IT'S GOING INTO BAG 357.

BAG 353
61295

CHIP FROM
BOULDER

109-17802	DSB	05 03 57 29	CDR	LOOK AT THAT, CHARLIE!
109-17803	DSB	05 03 57 31	LMP	WHAT'S THAT?
114-18412	XSB	05 03 57 32	CDR	THAT THING HAS - GREENISH-BLACK CLAST IN IT.
114-18413	XSB			RIGHT THERE IN THAT BOULDER, THERE?
114-18414	XSA	05 03 57 40	LMP	LOOKS LIKE IT TO ME, TOO, YEAH. LET'S SEE IF WE
109-17805	XSA			CAN GET A PIECE OF THAT. OKAY, TONY, THIS IS A
109-17804	LOC			SUBROUNDED ROCK - BOULDER THAT'S A METER TO A METER
				AND A HALF ACROSS, IT HAS A PREDOMINANT FRACTURE
				SET OF 20 CENTIMETERS ON THE SIDE THAT RUN HERE,
				SOUTHWEST NORTHEAST. IT'S
				THE PREDOMINANT FRACTURE SET.
05 03 58 06	LMP			AND IT'S PARTIALLY BURIED.
05 03 58 12	LMP			OKAY. AND JOHN, OVER HERE ALSO AS WE MOVE AROUND,
				THAT VERY WHITE MATERIAL IS RIGHT UNDER JOHN'S FEET
				I'LL TAKE A PICTURE OF THAT. AND HE'S REALLY
				CHANGED THE ALBEDO BY KICKING INTO THIS LITTLE
				CRATER BY THIS BIG ROCK. GOING TO GET ALL - AH, I
				HERE HE COMES, FOLKS. HE'S GOT THE HAMMER OUT, I
				KNEW HE COULDN'T RESIST.
05 03 58 52	CDR			I DON'T KNOW IF THIS WILL WORK OR NOT, CHARLIE,
				BUT IT COULDN'T PICK A BETTER SPOT. HERE WE GO.
05 03 58 58	LMP			GOING TO DO IT. THERE'S A PIECE. LET ME HOLD YOU
				DOWN A LITTLE BIT. HOT DOG! HE DID IT. IT'S A
				VERY FRIABLE ROCK, APPARENTLY, HOUSTON.
05 03 59 22	LMP			I GOT IT. LEANING ON THE SHOVEL. OKAY, HOUSTON,
				IT'S GOT SOME GREEN CLAST, SOME WHITE CLAST. A
				GRAYISH MATRIX. THE CLASTS ARE MILLIMETER SIZE
				AND MAKE UP 5 PERCENT OF THE ROCK. ONE BIG CRYSTA
				5 MILLIMETERS ACROSS, BUT I CAN'T TELL WHAT IT IS.
				BUT IT'S A BEAUTY.
05 03 59 58	CC			OKAY; YOU THINK THEY'RE STILL BRECCIA?
05 04 00 05	LMP			I'M NOT SURE I THINK IT MIGHT BE - YEAH, I THINK
				IT'S A BRECCIA, REALLY, VERY FRIABLE.
05 04 00 13	CDR			YEAH, IT'S A BRECCIA, HOUSTON.
05 04 00 17	CDR			WELL, NO - IT'S NOT REALLY. IT'S A BRECCIA, AND
				I CAN SEE AT LEAST - LIKE CHARLIE SAID, THERE ARE
				TWO OR THREE DIFFERENT TYPE CLASTS IN IT. IT'S
				JUST A ONE-STAGE BRECCIA, THOUGH, IT LOOKS LIKE.
				IT'S GOING INTO BAG 353.
05 04 01 11	LMP			BOULDER. JOHN, YOU JUST WHACKED THAT BEAUTY RIGHT
				OFF OF THERE.
05 04 01 19	CDR			LIKE YOU SAY, IT'S FRIABLE. I HIT IT ON A FRACTURE
				SET, TOO.
05 04 02 08	CDR			MY GUESS IS THAT THE ROCK IS THE WAY - IT'S LAID
				IN HERE, IT'S PROBABLY FROM THE BOTTOM OF PLUM,
				SOMEWHERE, OR DOWN THERE SOMEWHERE.

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SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: 1					
BAG 368 61280*		FILLET SOIL FROM SAME BOULDER AS BAG 353	SAME AS BAG 353	05 04 01 05	LMP OKAY, I'M TAKING A SOIL SAMPLE OF THE FILLET AROUND THIS ROCK.
				05 04 01 28	CDR 368 THIS STUFF IS GOING INTO, HOUSTON.
				05 04 01 31	CC OKAY, 368, THE SOIL.
				05 04 01 35	LMP OKAY, I'LL GET THE AFTER ON THAT, JOHN. OKAY?
				05 04 01 39	CDR CHARLIE'S GETTING THE AFTER ON THAT SOIL IN 368.

FSB-1 61015*	1803.0	ROCK	109-17808 XSB 109-17809 XSB 109-17810 LOC	05 04 04 08 05 04 04 36 05 04 04 38	LMP TONY, I'LL DOCUMENT THIS ONE WHILE JOHN - COMING OVER WITH THE SCOOP. IN PLACE IS A GNOMON. CDR DID YOU GET THAT BIGGY, CHARLIE? LMP THAT ONE RIGHT THERE IS WHAT I'M GONNA GET. THINK IT WILL GO IN THE BAG? NO. ----- LMP DON'T WANT TO TRY IT? OKAY; THIS ANGULAR ROCK IS TOO BIG FOR A BAG, AND IT'S GOT SOME GLASS ON IT AND IT THINK IT'S A BRECCIA ALSO, TONY. IT'S GOING IN JOHN'S SRC.

FSB-2 61016*		ROCK "MULEY"		05 04 07 30	CC AS YOU COME AROUND THERE, THERE IS A ROCK IN THE NEAR FIELD ON THIS RIM THAT HAS SOME WHITE ON THE TOP OF IT. WE'D LIKE YOU TO PICK IT UP AS A GRAB SAMPLE. LMP THIS ONE RIGHT HERE? CC THAT'S IT. LMP THIS ONE RIGHT HERE? CC THAT'S IT. YOU GOT IT, RIGHT THERE. CDR THAT'S A FOOTBALL-SIZE ROCK. LMP IT'S A "DAVE SCOTT" SIZE. CDR THAT'S 20 POUNDS OF ROCK RIGHT THERE. LMP OKAY. IT HAS SOME BIG CLASTS IN IT, JOHN. IT SURE HAS. LMP IF I FALL INTO PLUM CRATER GETTING THIS ROCK MUEHLBERGER HAS HAD IT. LMP OKAY; I'VE GOT IT. THAT'S 20 POUNDS OF ROCK! LMP OH, TONY, IT'S GOT SOME BEAUTIFUL CRYSTALS IN IT THROUGH. LMP OKAY, PUT IT IN THERE, JOHN. CDR PUT IT IN WHERE? LMP IN YOUR SCB. CDR I DON'T THINK IT'LL FIT. LMP IT AIN'T GONNA FIT. CDR PUT IT UNDER YOUR SEAT. LMP YEA. KIND OF DUSTY.

05 05 24 53 LMP TONY, I TAKE THAT BACK. THAT ROCK WE PICKED UP, THE BIG - THE MULEY IS - OH, I WAS GOING TO SAY GLASS CRYSTALS, BUT TAKE THAT BACK. PART OF IT SEEMS TO BE SHOCKED, AND IT'S A CRYSTALLINE ROCK ON THE INSIDE UNDER ALL THE DUST. WHATEVER IT IS. OKAY, FINE. WE'LL TAKE IT.

05 05 25 14 CC OKAY. I DROPPED IT ONTO THE STRUT; PART OF IT BROKE OFF. I'M SORRY.

05 05 48 19 CDR WHEW! THAT OTHER BIG MULEY WE'LL GET WHEN THE - WITH A BIG ROCK BAG LAYER ON.

05 08 24 07 CC YOU FIRST DESCRIBED THE MULEY ROCK AS A CRYSTALLINE AND THEN SWITCHED TO A - CORRECTION. YOU FIRST DESCRIBED IT AS A BRECCIA, THEN SWITCHED TO A CRYSTALLINE. I WONDER IF YOU COULD HAVE SOME THIRD OF FOURTH THOUGHTS ON THAT?

05 08 24 34 LMP I'D SAY WHEN I PICKED IT UP, IT WAS PRETTY DUST COVERED, AND ONLY HAD A COUPLE OF SPOTS TO - THAT I COULD LOOK. ONE AREA LOOKED LIKE A CRYSTALLINE ROCK. IF IT WAS A BRECCIA, THEN THAT CLAST IS PRETTY LARGE, A CENTIMETER OR SO. IF IT'S A CRYSTALLINE ROCK, THEN IT'S A SORT OF A FELDSPAR-LOOKING TYPE CRYSTAL. THE OTHER, WHEN I TURNED IT OVER, IT HAD ANOTHER ONE OF THOSE WHITE SPECKS THAT MOST OF THE BRECCIAS HAVE AROUND HERE, AND THAT'S WHEN I SWITCHED. SO IT COULD BE A COMBINATION, TONY.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: 2					
BAG 5		3 ROCKS, RIM OF BUSTER CRATER	109-17837 XSB 109-17838 XSB 109-17839 XSA 109-17840 LOC 109-17841 LOC	05 04 32 33 LMP 05 04 32 38 LMP	IF THAT IS A SECONDARY, THAT IS A BIG ROCK THAT HI IN THERE. THE ROCKS DOWN THERE ARE VERY FRACTURED, THOUGH. THE ROCKS DOWN THERE ARE EXTREMELY FRACTURED - YOU CAN SEE A MAJOR FRACTURE SET RUNNING - DIPPING ABOUT NORTH 30 DEGREES ON ONE ROCK. THE OTHER ONE IS SUBHORIZONTAL, SO IT'S A - JUST A VERY IMPRESSI SIGHT AS FAR AS THE BOULDER GOES. THEY'RE ALL .NGULAR. SOME OF THEM - WELL, I CALL SOME OF THEM SUBROUNDED, BUT THE MAJORITY OF THEM ARE ANGULAR. AND THEY HAVE A GRAYISH TEXTURE TO THEM AND THAT'S ABOUT ALL I CAN TELL. I GOT A PARTIAL PAN FROM UP HERE ON THE RIM. AND I'M GONNA START SAMPLING.
BAG 6	62240*	SOIL	SAME AS BAG 5 109-17838 XSB 109-17842 XSA	05 04 34 26 LMP 05 04 34 33 LMP	OK, THERE'S A SORT OF ANGULAR TO SUBROUNDED BLOCK GOING IN BAG NUMBER 5, TONY. IT'S DUST COVERED SO THAT'S ALL I CAN SAY ABOUT IT. I GOT ANOTHER LITTLE ONE, SAME SPOT; AND IT'S GOT A WHITISH CAST TO IT, AND ANOTHER LITTLE ONE THAT'S GOT A WHITISH CAST TO THE UNDERSIDE OF IT. ALL THAT IN BAG 5.
BAG 7	1192.0	ROCK, RIM OF BUSTER CRATER	109-17843 XSB 109-17844 XSB	05 04 36 20 LMP 05 04 37 08 LMP 05 04 38 11 LMP 05 04 38 20 LMP	OK, TONY. FROM HERE IS A SOIL SAMPLE GOING INTO BAG 6. THIS IS ON THE RIM OF BUSTER. THAT'S THE ROCK I WANT, BUT IT'S TOO BIG FOR THE BAG. BUT IT MIGHT GO IN THE BAG. THERE'S ANOTHER ROCK GOING INTO BAG 7. DUST COVERED. OK, I'M GOING ABOUT A QUARTER OF A DIAMETER AWAY FROM BUSTER AND SAMPLE SOME MORE.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLOLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 1 - STATION: LM					
FSR-3					
60015*				05 05 08 40	LMP THESE ROCKS - I PICKED UP ONE --
				05 05 08 44	LMP -- RIGHT OUT HERE THAT I DESCRIBED THAT BLUE --
				05 05 08 50	LMP -- THAT BLUE ONE THAT I DESCRIBED FROM THE LUNAR MODULE WINDOW, AND BY BLuish COLOR IS BECAUSE IT'S GLASS COATED, BUT UNDERNEATH THE GLASS, IT'S A CRYSTALLINE ROCK THAT, TO ME, HAS THE SAME TEXTURE AS THE GENESIS ROCK, AND IT'S NOT A BRECCIA. AT LEAST I CAN'T - THE PART I'M LOOKING ABOUT -- IS IT'S NOT A BRECCIA - MAYBE JUST ONE BIG CLAST. BUT THE PART I'M LOOKING AT IS A ONE SOLID - IT'S AN IGNEOUS, PLUTONIC ROCK.
				05 05 09 29	CC OKAY. HOW BIG WAS IT?
				05 05 09 33	LMP IT'S ABOUT FOOTBALL SIZE, LITTLE BIT SMALLER.
				05 05 34 27	LMP TONY, ONE OF THOSE BIG ROCK BAGS I MEAN, THOSE BIG ROCKS I COULD PUT INTO THE SRC. IT'S AN UNDOCUMENTED ROCK - GRAB SAMPLE. I DON'T MEAN THE SRC, BUT THE SCB. WHY DON'T WE JUST LEAVE IT THERE AND GET IT FOR NEXT TIME, TONY?
				05 05 34 51	LMP I TELL YOU WHAT, I'M GONNA GET IT. BAG 5.
				05 05 48 06	CDR OKAY. HARDLY NOTHING IN THE SCB, RIGHT?
				05 05 48 08	LMP ONE BIG ROCK IS ALL.
				05 05 48 54	LMP OKAY, TONY. WE'RE BRINGING SCB NUMBER 5 IN WITH A BIG ROCK.
				05 07 14 06	LMP OKAY, HOUSTON. SCB NUMBER 5 IS IN SAMPLE CONTAINMENT BAG NUMBER 5, AND IT WEIGHS 14 POUNDS.
				05 07 14 44	LMP THAT WAS ONLY ONE ROCK, AND THAT WAS A GRAB SAMPLE THAT I GOT ABOUT 30 METERS IN FRONT OF THE LM. OVER.

EVA 2 - STATION: LM

05 23 08 56 LMP I GOT TO GET A PAN, JOHN. SO IT'LL BE A FEW MINUTES. WHY DON'T YOU RUN AROUND AND PICK UP A ROCK.

05 23 09 02 CDR HEY! OUTSTANDING SUGGESTION. GIVE ME A ROCK BAG, CHARLIE.

05 23 10 13 CC AND JOHN, IF YOU'RE PICKING UP A ROCK, COULD YOU GET THAT - -

05 23 10 17 CC - - THE VESICULAR BASALT UNDERNEATH THE ENGINE BELL?

05 23 10 24 CDR YEP. SURE COULD DO THAT.

05 23 10 27 LMP TONY, THAT IS A DOUBLE MULEY - THAT ROCK.

05 23 10 59 CC JUST FORGET THAT BIG ROCK FOR NOW. THAT'S TOO BIG TO HANDLE.

05 23 11 07 CDR IT'S INACCESSIBLE; IT'S UNDERNEATH THE ENGINE COVER.

05 23 11 15 CDR BUT THERE'S PROBABLY ANOTHER NICE ROCK - I'M SURE THERE'S ANOTHER GOOD ROCK AROUND HERE THAT I'VE BEEN EYING OUT MY WINDOW I WANTED TO GET ANYWAY.

05 23 11 27 LMP I HATE TO TELL YOU, BUT I NEED YOUR CAMERA FOR THE - HERE, TAKE MINE WITH THE BLACK-AND-WHITE AND LET ME HAVE YOURS FOR THE PAN.

05 23 12 12 LMP PAN QUAD III. WELL, GUESS WHAT? I'M ON THE WRONG SIDE. IF YOU WANT SOME OF THIS BLACKISH ROCK, JOHN, A SMALL ONE THAT'S BAGABLE, THERE'S A BUNCH RIGHT OUT HERE THAT LOOK JUST LIKE WHAT I CALL THAT BASALT. IN FACT, THERE'S HUNDREDS OF THEM.

05 23 13 08 CDR YEAH. THEY'RE OUT FROM THAT LITTLE IMPACT CRATER WE JUST LANDED BEYOND. AND I WANT TO GET THIS NICE WHITE ONE RIGHT HERE.

FSR # 60016 4307.0 ROCK

109-17866 XSB 05 23 15 08 CDR OKAY. HOUSTON. I JUST PICKED UP THIS ROCK. IT'S A WHITE ROCK, A VERY WHITE ROCK, BUT IT HAS A BLACK GLASS LAYER ON THE BACK OF IT, OR WHAT APPEARS TO BE BLACK GLASS - A THICK BLACK GLASS; AND IT'S ABOUT A HAND-SIZE SPECIMEN. I CAN'T GET IT IN THE BAG, BUT I'LL GET IT ANYWAY. AND IT HAS A LOT OF ZAP CRATERS IN IT, AND LINING THE ZAP CRATERS ARE SOME WHITISH SUBSTANCE.

SAMPLE #A? MAY REFER TO FSR-3

05 23 28 21 CDR LOOK AT THE ROCKS AROUND THERE, CHARLIE.

05 23 28 26 CDR THERE'S YOUR BASALTS AND THINGS. THOSE ARE BLACK. THEY'RE PROBABLY GLASS COVERED, DON'T YOU THINK?

05 23 28 31 LMP THEY ARE. I PICKED UP ONE OUT THERE. SEL WHERE MY FOOTPRINTS GO?

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 4					
BAG 394 64435*		ROCK	107-17443 XSB 107-17444 XSB 107-17445 XSB, 107-17447 XSA 107-17446 LOC 107-17445 LOC	06 00 16 05 06 00 17 08 06 00 17 19 06 00 18 38 06 00 19 02	<p>MOST OF THESE ROCKS HAVE A WHITISH CAST TO THEM, HOUSTON, BUT --</p> <p>LOOK UPSLOPE, TONY. OK, LOOK ON UPSLOPE, AND YOU SEE ALL THIS ROCK FIELD THAT WE'RE IN HERE.</p> <p>OK. I WAS JUST GOING TO GET THIS ONE SAMPLE.</p> <p>I'VE GOT A HARD ROCK. I THINK IT'S GLASS COATED, BUT IT'S SC DUST COVERED I CAN'T TELL, AND IT'S GOING IN BAG 394.</p> <p>THE BLOCK POPULATION HERE IN THIS IMMEDIATE AREA IS 60 TO 70 PERCENT, WITH THE BIGGEST ONE BEING RIGHT IN OUR LITTLE CRATER HERE THAT'S A METER OR SO. THEY'RE ALL VERY ANGULAR BUT THE MAJORITY OF THEM</p> <p>ARE LESS THAN, OH, LESS THAN 30 CENTIMETERS OR SO, THOUGH THERE'S A GOOD PROPORTION OF 50 -- LET ME PUT THIS IN YOUR BAG, CHARLIE.</p> <p>MOST OF THEM ARE DUST COVERED. WELL, NOT MOST OF THEM; IN FACT, MOST OF THEM ARE NOT DUST COVERED.</p>

BAG 395 64410*		RAKE FRAGMENTS	110-17947 DSB 107-17448 XSB 107-17449 XSB 107-17450 XSD 110-17948 LOC	06 00 20 05 06 00 20 09 06 00 20 10 06 00 20 16 06 00 20 18 06 00 20 38 06 00 21 00 06 00 21 24 06 00 21 37 06 00 21 43 06 00 21 45 06 00 21 46 06 00 21 50	<p>LET ME RAKE THIS TIME AND THEN I'LL GET ON WITH THE PENETROMETER, OLAY?</p> <p>OKAY, FINE.</p> <p>THERE'S A PLACE RIGHT UP HERE, JOHN, THAT LOOKS LIKE IT'S A GOOD --</p> <p>OKAY, LET'S NOT GO TOO FAR.</p> <p>I'M NOT. IT'S PRETTY STEEP. THERE'S A PLACE RIGHT HERE THAT'S GOT A LOT OF GOOD ONES.</p> <p>LET ME GET UP-SUN, AN 11-FOOTER</p> <p>OK, GOT IT. AND LET ME GET A LOCATOR FROM UP HERE, TOO. UNDERNEATH THIS REGOLITH UP HERE, WE'VE STILL GOT THE SAME DEAL. TOP CENTIMETER OR SO IS --</p> <p>NOW WE RAKE.</p> <p>OK. MOST OF THESE ROCKS WERE WHITE CLASTS. GLASS COATED, TOO - A LITTLE --</p> <p>GLASS COATED.</p> <p>-- ON SOME OF THEM.</p> <p>THERE'S 12 OR 13 IN THAT FIRST SCOOP, AND THEY'RE MOSTLY WHITE CLAST ROCKS.</p>

06 00 22 00 LMP HERE COMES ONE THAT'S GOT A LOT OF GLASS ON IT.
 06 00 22 10 CC YOU THINK YOU'RE GETTING BRECCIAS THERE, THEN?
 06 00 22 17 CDR NO, WE'RE NOT SURE BECAUSE THEY'RE DUST COATED
 TOG, AND THERE'S GLASS - THERE'S GLASS ON THEM.
 THEY COULD BE JUST SHOCKED ROCK.
 06 00 22 27 CDR OK, THAT'S GOING INTO BAG 395.
 06 00 22 30 LMP I DON'T GET THE IMPRESSION - -
 06 00 22 33 LMP - - THEY'RE BRECCIAS, MYSELF.
 06 00 22 34 CDR I DON'T EITHER. BUT IT'S JUST AN IMPRESSION.
 06 00 22 48 LMP YOU WANT TO GET AN AFTER OF THAT, JOHN? I'LL
 GET A SHOVELFUL.

06 00 23 22 LMP WANT TO GET THAT KILO. OK.
 06 00 23 29 LMP ... SOME OF THAT WHITE STUFF IN THE BOTTOM.
 06 00 23 32 LMP THAT'S WHAT I WAS GOING TO SAY. UNDERNEATH
 THIS TOP GRAY LAYER, IT'S WHITE AGAIN UP HERE,
 JUST LIKE ON THE CAYLEY.
 06 00 23 42 LMP THAT'S A KILO, ISN'T IT?
 06 00 23 45 CDR YEAH.
 06 00 23 46 LMP YOUR OLD RAKE IS FINISHED.
 06 00 23 56 CDR AND IT'S IN BAG 396.

06 00 25 57 CDR I'M LOOKING AT A ROCK HERE THAT IS A VERY ANGULAR
 ROCK, AND IT HAS WHITE CLASTS WITH A BRECCIA, OR
 IT HAS A BRECCIATED APPEARANCE. I'LL TAKE A
 PICTURE OF IT AND SAMPLE IT FOR YOU.
 06 00 32 15 CDR I'M SAMPLING INDEPENDENTLY, AND I'VE GOT FOUR
 SAMPLES IN BAG 399. THEY'RE SO DUST COVERED
 THAT I CAN'T TELL ANYTHING ABOUT THEM - -
 06 00 32 25 CDR - - BUT I SUSPECT THEY'RE LYING BY THIS BIG
 ROCK, AND THEY MAY BE THE SAME KIND OF ROCK
 CHARLIE, I'M GOING TO GET THAT BAG OUT FROM
 UNDERNEATH YOUR SEAT AND PUT THE SAMPLES IN
 THERE.

06 00 29 08 CDR DON'T STEP RIGHT THERE, CHARLIE. HERE'S A
 GLASS SPLATTER.
 06 00 29 12 LMP OH YEAH. I SEE IT. A WHOLE BIG RUBBLE OF IT,
 ISN'T IT?
 06 00 29 22 CDR I'M GOING TO GRAB SAMPLE THIS GLASS
 SPLATTER BEHIND THE ROVER.
 06 00 29 33 LMP GOOD. JOHN, IF YOU SEE IT, THERE'S ONE UNDER THAT
 ROCK. IS THAT THE ONE YOU'RE TALKING ABOUT?
 06 00 29 40 CDR YEAH.
 06 00 29 57 CDR AND THAT'S GOING INTO BAG 397.

BAG 396
 64500* RAKE SOIL
 SAME AS
 BAG 395

BAG 398
 64475* 4 ROCKS
 107-17453 DSB
 107-17451 XSB
 107-17452 XSB
 107-17457 DSA
 107-17454 LOC

BAG 397
 64455* GLASS SPATTER
 107-17455 XSB
 107-17456 XSB

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 4					
BAG 399		TRENCH SOIL	107-17458 XSA	06 00 35 31	CDR OKAY, HOUSTON. I'M DIGGING AN EXPLORATORY TRENCH RIGHT HERE TO SEE IF THE MATERIAL IS BLACK.
64420*			107-17459 XSA	06 00 35 43	CDR - IT'S SURE HOT. I MEAN THE MATERIAL IS NOT WHITE. IT'S JUST THE SAME AS IT -
			107-17460 XSA	06 00 36 19	CDR I'VE COME DOWN ABOUT - A
			107-17461 XSA	06 00 36 35	CDR SHOVELL WIDTH, AND IT'S ALL THE SAME MATERIAL. AND I DON'T SEE ANY LAYERING IN IT OR ANYTHING.
			107-17462 XSA	06 00 37 43	CDR I'VE GOT A SAMPLE OUT OF THE DEEPEST PART OF THIS TRENCH THAT I'M DIGGING, AND IT'S GOING INTO BAG -
				06 00 38 00	CDR BAG 399.

U-43/L38		DOUBLE DRIVE TUBE	110-17949 XSD	06 00 37 23	LMP TONY, DO YOU WANT THIS DOUBLE CORE - IN THE DITCH HERE OR DOWNSLOPE WHERE I THINK IS PROBABLY CLOSER TO DESCARTES?
64002/	584.1/		110-17950 XSD	06 00 38 16	CC CHARLIE. WHY DON'T WE JUST GO AHEAD AND TAKE IT DOWNSLOPE THERE ABOUT YOUR LAST PENETROMETER PLACE.
64001*			110-17951 LOC	06 00 41 05	LMP THE OLD DOUBLE CORE IS ASSEMBLED. TONY, IN THE RECOLITH, YOU SEE LITTLE BRIGHT SPECKLES LOOKING AT YOU, AND I THINK IT'S GLASS PARTICLES. JOHN HAS ALREADY SAMPLED - SOME OF THEM.
				06 00 42 49	LMP I DON'T WANT TO GET DOWN THERE TOO FAR. THIS THING IS DEEP. I'M TO THE 2:30 POSITION OF THE ROVER, AND I'M GOING TO START WITH THIS DOUBLE CORE - GOT IT ASSEMBLED. OK. I PUSHED IT IN. I GOT IN ALMOST TO THE TOP OF THE FIRST STEM BY PUSHING IT IN.
				06 00 44 00	LMP OK, TONY, ABOUT HALFWAY UP THE SECOND ONE - IT'S GETTING A LITTLE HARDER, BUT IT'S GOING ON IN.
				06 00 44 18	CC OK. MAYBE WE'RE GETTING DOWN TO DESCARTES THERE.
				06 00 46 01	LMP I'M FINISHING UP THE DOUBLE CORE RIGHT NOW.
				06 00 46 11	LMP I'VE GOT IT BACK HERE, AND I'M TAKING IT APART.
				06 00 46 35	LMP CAPPED, BOTTOM SECTION.
				06 00 47 31	LMP THAT'S FULL. BOTTOM SECTION WAS 38.
					LMP TOP SECTION IS NUMBER 43.

BAG 400
64600

SCOOP SOIL

107-17463 DSB
107-17464 DSB
107-17465 XSB
107-17466 XSB

06 00 45 09 CDR I'M STANDING ON THE RIM OF THIS CRATER OVER HERE. THE ONLY ROCK I SEE ON THE SOUTH RIM OF THIS OBVIOUS SECONDARY IS NOT TOO BIG. I CAN GET DOWN INTO THE CRATER AND LOOK DOWN IN IT, AND SEE IF I CAN SCRATCH AWAY TO A BENCH, IF YOU'D LIKE TO DO THAT.

06 00 47 05 CDR WHAT I'LL DO, HOUSTON, IS GET A SOIL SAMPLE OFF THIS RIM. THAT'S THE ONLY THING I CAN BE ASSURED OF THAT'S DESCARTES RIGHT AT THIS POINT.

06 00 47 20 CDR THAT'S GOING IN BAG 400.

06 00 59 23 CDR I THINK THE FACT THAT WE DIDN'T RUN ACROSS ANY WHITE SOIL MAY BE SIGNIFICANT AROUND HERE.

BAG 401
64610

RAKE FRAGMENTS

SAVE AS
BAG 400
107-17490 XSA
107-17491 XSA

06 00 51 37 CDR LET ME GET THE RAKE SAMPLE, CHARLIE. GET IT.
06 00 51 43 LMP OK. THERE'S A LOT OF CODDIES RIGHT THERE ON THE INNER RIM.
06 00 51 48 CDR THAT'S WHERE I'LL RAKE - RIGHT THERE.

06 00 52 01 LMP YEAH. HERE, LET ME HAVE THE SHOVEL. OK. I GOT IT.
06 00 52 13 LMP THAT'S A CLOUD. THAT'S AN INDURATED CLOUD. HERE'S SOME ROCKS. GOOD DEAL, BOY THAT'S GREAT. HEY, LET'S FILL THIS ONE UP, AND THEN - REAL DUST-COVERED, MOSTLY CENTIMETER SIZE, TONY - ABOUT 15 FRAGS - SOME SMALLER THAN THAT. I'VE ALREADY GOT MY SHOVEL FULL HERE, CHARLIE.
06 00 52 52 CDR OK, OF THE DIRT?
06 00 52 54 LMP I HATE TO TELL YOU THIS, BUT I THINK IT'S INDURATED REGOLITH.
06 00 53 03 LMP BECAUSE I'M JUST BREAKING IT UP.
06 00 53 07 LMP VERY FRIABLE. LIKE DUST - DIRT CLOUDS.
06 00 53 10 CDR WHICH IS PROBABLY WHAT IT IS.
06 00 53 14 LMP WANT TO GET ANOTHER ONE?
06 00 53 17 CDR YEAH. CAN YOU TRY ANOTHER ONE?
06 00 53 19 LMP I DON'T THINK THESE ARE ROCKS.
06 00 53 28 LMP IF THEY ARE, THEY ARE VERY FRIABLE. I THINK IT'S JUST INDURATED REGOLITH.
06 00 53 40 CDR WELL, THERE MAY BE A ROCK OR TWO IN THERE.
06 00 53 55 CDR MAYBE SOME OF THEM ARE ROCKS. THAT WAS THREE SCOOPS, AND WE'RE NOT DOCUMENTING THIS TO THE BEST OF OUR ABILITY, BECAUSE I THINK WE'RE STANDING TOO CLOSE TO THE RIM. HELL TO -

06 00 54 19 CDR THE LOCATOR SHOT WILL BE IN THE PAN, AND I'M GOING TO SHOOT THIS - THIS IS AN UP-SUN, AFTER, OF THE RAKE SAMPLE, STEREO.

06 00 54 31 LMP THAT WAS IN BAG 401.

06 01 18 55 LMP NOW, THAT'S A GOOD BAGFULL.
 06 01 18 57 LMP ONE SCOOP.
 06 01 19 00 CDR WANT ME TO DO IT AGAIN?
 06 01 19 02 LMP WELL, WE GOT A BAGFUL.
 06 01 19 03 CDR NOTICE THE COLOR OF THE MATERIAL, CHARLIE. IN THE BOTTOM OF IT - IT'S WHITE. WE GET A KILO OF SOIL.
 06 01 19 11 LMP THAT'S WHAT THIS IS. THIS ISN'T ROCKS.
 06 01 19 14 CDR FRIABLE SOIL?
 06 01 19 15 LMP YEAH.
 06 01 19 16 CDR THAT COULD BE DESCARTES, CHARLIE.
 06 01 19 19 LMP THAT RAKE SOIL - SAMPLE WAS IN 332, AND I JUST, PINCHED ONE OF THE ROCKS, AND IT BROKE.
 06 01 19 34 LMP IT'S PROBABLY GOING TO BE A BAGFUL OF SOIL WHEN WE GET IT BACK.
 06 01 19 38 CC WELL, THAT MAY STILL BE DESCARTES.
 06 01 19 44 CDR IT MAY BE.
 06 01 19 46 LMP I THINK IT IS.

BAG 333 RAKE SOIL WANT ANOTHER ONE?
 65500 619.4 UNSORTED BAG 332 YEAH. LIGHTER ALBEDO MUCH LIGHTER ALBEDO. AND IF I HAD MY DRUTHERS, IT'S SOMEWHERE BETWEEN THE GRAY AND THE WHITE OUT ON THE PLAINS.
 06 01 20 08 LMP THAT'S GOOD, JOHN. IT'S ABOUT A KILO.
 06 01 20 24 LMP IT'S SOMEWHERE BETWEEN THE GRAY OF THE SURFACE AND THE WHITE MATERIAL THAT WE PICKED UP OUT ON THE PLAINS. AND WE GOT A BAGFUL OF MOST OF THAT FROM SCOOPING UNDERNEATH THE ROCK SAMPLES.

BAG 334 RAKE FRAGMENTS
 65610* 107-17496 XSB NOW, THE ONLY ROCKS WE SEE ARE REALLY ANGULAR, AND THEY'RE ON THIS RIM. AND I GUESS THE PROBLEM IS - IT WAS A CRATERING EVENT WAS PROBABLY SO LONG AGO. THERE'S JUST NOT EVEN A HINT OF ANY LEDGES OR BEDROCK IN THIS RASCAL.
 06 01 22 27 CDR JOHN, WHY DON'T YOU TAKE THE RAKE RIGHT HERE IN FRONT OF THE GNOMON - I'VE ALREADY DOCUMENTED THAT AREA - AND SEE WHAT YOU GET?
 06 01 22 56 LMP TAKE THE RAKE WHAT, CHARLIE?
 06 01 23 04 CDR AND JUST RIGHT HERE IN FRONT THE GNOMON AND SEE
 06 01 23 06 LMP WHAT YOU GET. ONE SCOOP AND - IT MIGHT BE -

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
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EVA 2 -- STATION: 5

06 01 23 27	CDR	I DON'T THINK YOU'RE GONNA GET ANYTHING BUT SOIL!
06 01 23 31	LMP	I DON'T EITHER. THERE'S SOME ROCKS, 2.
06 01 24 12	LMP	THERE WE GOT A FEW OF THOSE.
06 01 24 17	CC	OKAY. DO THOSE LOOK LIKE CLOUDS TOO?
06 01 24 23	LMP	NO, THEY DON'T. THERE'S AT LEAST ONE OF THEM THAT'S GLASS COATED.
06 01 24 34	CDR	HEY, THERE'S SOME.
06 01 24 36	LMP	THESE ARE WHITTISH TYPE ROCKS, VERY SMALL, THEY MAY HAVE COME FROM SOUTH RAY.
06 01 24 49	LMP	HOW ABOUT ONE MORE SCOOP JOHN?
06 01 25 10	CDR	HEY, LOOK AT THAT.
06 01 25 14	LMP	AND ALL OF THOSE ARE ROUNDED.
06 01 25 14	CDR	AS CHARLIE POINTED OUT, THE DIFFERENT CHARACTERISTICS OF THESE ROCKS THAT WE'RE JUST CUTTING RIGHT NOW, AND MAYBE THAT'S THE KEY, IS THAT THEY'RE MORE ROUNDED THAN THE SOUTH RAY CRATER ROCKS ARE.
06 01 25 31	CDR	THERE ARE A FEW ANGULAR IN THERE, BUT THESE ARE MOSTLY ROUNDED; AND I SEE SOME LITTLE BLACK GLASS ON ONE, BUT THEY'RE MOSTLY ROUNDED, WHITTISH ROCKS COVERED WITH DUST, OF COURSE.
06 01 25 42	LMP	THESE ARE A COUPLE OF GOOD ONES.
06 01 25 49	LMP	BAG 334.

BAG NUMBER	SOIL	CREW COMMENTS
BAG 402		
65600*		
	SAME AS BAG 334	OKAY. LET ME GET SOME SOIL HERE.
		WAIT A MINUTE, CHARLIE.
		YOU REALLY FEEL LIKE YOU'RE ON THE VERGE OF INSTABILITY, DON'T YOU?
		YEAR.
		I'VE GOT THE GLOVES SO DIRTY.
		OKAY. THAT'S GOING INTO BAG 402.

BAG 403
65075

ROCK

107-17500 XSB	06 01 29 05	LMP	GET IT - GET THAT - THAT RIGHT THERE.
107-17501 XSB	06 01 29 07	CDR	I AM, I'M TRYING TO GET UPSLOPE ON IT.
107-17502 XSB	06 01 29 10	LMP	HERE LET ME - I CAN GET IT.
	06 01 29 28	LMP	OKAY. I GOT IT.
	06 01 29 32	CC	THE WHITE ROCK THAT YOU PICKED UP AND THE
			ONES YOU JUST HAVE HERE, CAN YOU SEE ANY
			CRYSTALS IN IT?
	06 01 29 40	LMP	YES, SIR. I SURE CAN. IT'S BLUISH CRYSTAL,
			A COUPLE OF MILLIMETER SIZE.
	06 01 29 49	CDR	BLUISH?
	06 01 29 51	LMP	WELL, THAT'S WHAT IT LOOKED - GRAYISH MAYBE -
			AND ONE CORNER OF IT'S GOT A GLASS RIND ON IT
			ABOUT A HALF A CENTIMETER THICK.
	06 01 20 08	LMP	IT DOESN'T LOOK LIKE A BRECCIA, TONY. IT LOOKS
			LIKE A CRYSTALLINE ROCK.
	06 01 30 13	CDR	YEAH, IT'S GOT A LOT OF - IT'S FINE GRAINED -
			IT SEEMS TO BE A FINE-GRAINED CRYSTALLINE ROCK
			ANYWAY, THE PART THAT WE CAN SEE. THE PARTICLES
			IN IT ARE MILLIMETER SIZE, THOUGH. I SEE SOME
			MILLIMETER-SIZE SPARKLIES FLASHING AT ME. THAT'S
			GOING IN BAG 403.

BAG 404
65035

ROCK, GLASSY
COATING

110-18023 XSB	06 01 30 34	LMP	HEY, JOHN, I'M HAVING ABOUT STRIKE OUT ON THIS
110-18024 XSB			RAKE HERE. I CAN'T - GET A COUPLE OF LITTLE ONES
107-17503 XSD			EACH TIME, BUT - -
107-17504 XSA	06 01 30 47	LMP	WANT TO MOVE ON AROUND THERE ABOUT 10 FEET OR SO?
THRU	06 01 30 50	CDR	OKAY.
107-17507 XSA	06 01 30 51	LMP	PICK A SPOT. I'LL FOLLOW IN YOUR TRACKS. YOU'RE
110-18025 XSA			SLIDING DOWNHILL ABOUT 2 INCHES EVERY TIME YOU -
110-18026 XSA			I CAN'T GET GOING, HERE. LOOK AT THAT GLASS
			COVERED ONE RIGHT THERE.
	06 01 31 12	CDR	LET'S GET IT, CHARLIE.
			- - -
	06 01 31 34	LMP	GONNA BE JUST ONE ROCK AND ONE BAG HERE.
	06 01 31 52	LMP	HEY, TONY, WE JUST PICKED YOU UP A GLASS RIND
			ROCK - AT LEAST A QUARTER OF IT'S GOT GLASS ON
			IT, AND IT'S SO DUST COVERED THAT IT - -
	06 01 32 09	CDR	- - DEFIES DESCRIPTION.
	06 01 32 12	CDR	404 IS THE BAG NUMBER - -

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 5					
BAG 405 65310*		RAKE FRAGMENTS PLUS LARGER ROUNDED ROCK	SAME AS BAG 404 107-17504 XSB 107-17505 XSA 107-17506 XSA 107-17507 XSA 110-18026 XSA	06 01 32 33 06 01 32 56 06 01 33 26 06 01 33 33 06 01 33 34	LMP LMP CDR CDR LMP LMP
				06 01 33 37	CDR I DON'T THINK THIS IS GOING TO BE A SIMPLE PROBLEM, EVEN AFTER YOU --
				06 01 33 48	CDR -- GET THE ROCKS BACK BECAUSE THEY'RE SO DARK - SO DARK - DARK - IT'S 405.
				06 01 33 54	CDR GO IN BAG 405. THAT'S A BIG ROUND ROCK THAT'S DUST COVERED. I SEE WHITE STREAKS THROUGH IT, AND I CAN'T TELL FROM THE CLASTS SHOWING THROUGH THAT I CAN SEE WHETHER IT - I DON'T KNOW WHETHER I CAN SEE ANY GLASS ON IT OR NOT. BUT IT'S A FRIABLE WHITE ROCK, AND IT'S ROUND.
				06 01 34 17	CDR GOING INTO BAG 405 WITH CHARLIE'S RAKE SAMPLE.

BAG 335 65710*		RAKE SOIL, DEEP	107-17508 XSA 107-17509 XSA	06 01 34 29 06 01 34 38 06 01 34 40 06 01 34 42 06 01 34 45 06 01 34 49 06 01 34 53 06 01 35 15 06 01 35 18 06 01 35 53	CC CDR LMP CC CDR LMP CDR CDR LMP LMP LMP
					WE'D LIKE YOU TO FIND THE STEEPEST SLOPE THAT YOU CAN WORK ON THERE, AND DIG AS DEEP AS YOU CAN WITH THAT RAKE.
					LET ME DO THAT, CHARLIE.
					WE'RE ON IT RIGHT NOW, BABE. I'LL TELL YOU.
					OK, CAN YOU DIG INTO THE FACE OF THE SLOPE A BIT?
					LET ME DIG. CHARLIE, LET ME DO THAT.
					OK. I'LL SWAP WITH YOU.
					HOLD THE GNOMON.
					STEEPEST IS CLOSEST TO THE RIM.
					THAT'S RIGHT. RIGHT UP THERE.
					OK, TONY. WE'VE GONE VERTICALLY INTO THE WALL, ABOUT A FOOT, AND IT ALL LOOKS THE SAME. OCCASIONALLY, YOU SEE A WHITE SPLITCH.

06 01 36 33 CDR WHOOP. ONE THING ABOUT BEING ON A 20-DEGREE SLOPE. YOU CAN GET DOWN ON YOUR KNEES. LOOKS LIKE JUST INDURATED RECOLITH, DOESN'T IT. DON'T SEE ANY ROCKS. HERE LET ME DO THIS. THERE'S ONE. YEAH. THERE'S SOME. YEAH, THEY'RE ROCKS ALL RIGHT. GOING IN BAG 335, THREE LITTLE ONES, TONY. NO, THEY AREN'T; THEY'RE CLOUDS. BUT, ANYWAY, 335.

06 01 37 50 LMP

06 01 37 56 LMP

06 01 38 05 LMP

06 01 38 16 CC

06 01 38 27 LMP

06 01 38 37 LMP

WELL, YOU THINK THE ROCK CONCENTRATION NEAR THE SURFACE IS A LAG SURFACE, THEN? APPARENTLY SO BECAUSE IN THIS WALL HERE, WE'RE NOT GETTING A THING. AND THERE'S LESS SOIL HERE - I MEAN LESS ROCKS HERE THAN ON THE OTHER SIDE OF THE CRATER.

BAG 406
65700*

SOIL AND ROCK

107-17508 XSA

107-17509 XSA

06 01 39 04 LMP NOW THERE IS A PURE - THERE ARE TWO ROCKS, RIGHT THERE.

06 01 39 08 CDR HEY, CHARLIE, I GOT TO PUT THIS ONE IN YOUR BAG BEFORE I CAN GET IT.

06 01 39 32 LMP GET YOU A SOIL - THEY WANT A SOIL BAG FULL. HATE TO WASTE A BAG ON THAT ONE, BUT - -

06 01 39 39 CDR LET'S PUT THE SOIL IN THERE WITH THE ...

06 01 39 42 CDR BAG 406 WILL HAVE ONE ROCK IN IT AND A SOIL SAMPLE FROM THIS LOW AREA.

06 01 39 55 LMP LET'S FILL UP THE BAG.

06 01 39 59 LMP AND, TONY, A LOT OF THIS SOIL IS COMING OUT FROM ABOUT 6 INCHES DOWN - -

BAG 336
65095*

ROUNDED, DUSTY
ROCK

110-18027 XSB

110-18028 XSB

06 01 44 35 LMP OK, TONY. I'M SAMPLING RIGHT IN FRONT OF THE ROVER. - ABOUT '10 FEET. I GOT A FIST-SIZE ROCK OUT HERE.

06 01 44 48 LMP IT'S CAPTURED IN THE OLD TONGS.

06 01 45 42 LMP THAT ROCK'S GOING IN 336. IT'S A ROUNDED ROCK AND IT'S DUSTY, AND ALL I CAN SEE IS SOME STREAKS ON IT, WHITE STREAKS.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 5					
ROCK, CRYSTALLINE NO PHOTOGRAPHS					
PSR-5				06 01 47 08	CDR HEY, CHARLIE, WHERE I TRIPPED OVER HERE IS A LOT OF WHITE ROCK.
65015*				06 01 47 21	LMP I GOT SOME OVER HERE, TOO. BOY, I'M GOING TO GRAB THAT ONE. THAT'S A FRESH, SHARP, WHITE ROCK THAT I HAVE NEVER SEEN THE LIKE OF. VERY ANGULAR.
				06 01 47 51	CDR LOOK AT THIS ROCK. THAT HAS GOT TO BE FLAG.
				06 01 48 04	LMP WHEREABOUTS DID YOU FIND IT, JOHN?
				06 01 48 05	CDR RIGHT DOWN THERE IN THAT HOLE - -
				06 01 48 08	CDR - - WITH ALL THAT WHITE ROCK.
				06 01 48 10	CDR LOOK AT THESE LITTLE CRYSTALS IN IT. NO, THAT COULDN'T BE. A BIG, WHITE, ANGULAR ROCK, BUT ALL THE CRYSTALS IN IT ARE VERY SMALL. THAT IS A CRYSTAL ROCK. WE'RE GONNA GET THAT ONE. THAT'S THE FIRST ONE I'VE SEEN HERE THAT I REALLY BELIEVE IS A CRYSTAL ROCK.
				06 01 48 54	CDR IT'S ABOUT 6 CENTIMETERS - 12 CENTIMETERS LONG, AND IT'S GOT A HEAD ON IT LIKE - IT LOOKS LIKE THE HEAD OF A - MAYBE A VIPER OR DIAMONDBACK, IF YOU LAY IT DOWN FLAT. YOU WON'T HAVE ANY TROUBLE RECOGNIZING IT. AND IT'S WHITE, AND WHEN I HOLD IT UP TO THE SUN, IT HAS A GREENISH CAST TO IT. A GREENISH-BLUIISH CAST.
				06 01 49 26	CDR I SEE SOME STRIATIONS IN IT, TOO. THEY MAY BE MY IMAGINATIONS.
				06 01 49 47	CDR OK, I'M PUTTING THIS ROCK UNDER YOUR SEAT.
				06 01 50 46	CC AND, JOHN, DO YOU HAVE A BAG NUMBER FOR YOUR WHITE ROCK, OR HAVE YOU COLLECTED IT YET?
				06 01 50 52	CDR I MADE A GRAB SAMPLE OUT OF IT, HOUSTON.
				06 01 50 58	LMP TOO BIG FOR A BAG, WASN'T IT, JOHN?
				06 01 51 00	CDR YEAH, IT WAS TOO BIG FOR A BAG.
				06 01 53 10	LMP THAT IS A CRYSTALLINE ROCK IF I'VE EVER SEEN A CRYSTALLINE ROCK.
				06 01 53 15	CDR FIRST ONE TODAY.
				06 01 53 40	LMP IT'S NOT VERY BIG, BUT IT'S JUST A NICE ROCK.
				06 01 53 46	LMP YEAH. IT WAS MADE ABOUT - IT LOOKS LIKE IT'S ABOUT 3 DAYS OLD. NO, IT MUST BE ON THE ORDER OF 4 BILLION.
BAG 337					
65055*					
2 ROCKS					
110-18029 XSB					
110-18030 XSB					
TONY, I'VE GOT TWO MORE ROCKS DOCUMENTED IN 337.					

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 6					
BAG 408			SAME AS	06 02 14 53	CDR LET'S GRAB THIS ANGULAR ONE NEXT.
66055*			BAG 407	06 02 15 03	CDR LET ME GET IT WITH THE TONGS.
			107-17514 XSB	06 02 15 16	LMP MIGHT BE THE SAME KIND, JOHN, THAT YOU PICKED UP UP THE WAY THERE.
				06 02 15 30	LMP THAT IS - PARTIALLY SACKED. THERE WE GO. YOU GOT IT.
				06 02 15 33	CDR GET THE AFTER. GOT IT. 408 IS THE BAG NUMBER.

BAG 338		SOIL	SAME AS	06 02 15 55	CDR WHY DON'T YOU GET A SOIL SAMPL?
66040	166.5	RESERVE FINES	BAGS 407, 408	06 02 15 57	LMP OK; THAT'S A GOOD IDEA.
66041	357.4	< 1 MM	108-17627 DSB	06 02 16 07	LMP MAYBE WE COULD GO TO ONE MORE AREA. AND SO WE WON'T SALT IT WITH IT, THIS IS JUST ONE BROKEN-UP BLOCK HERE.
66042	19.5	1-2 MM	107-17512 XSB		
66043	15.5	2-4 MM	107-17513 XSB	06 02 16 28	LMP 338 IS THE SOIL SAMPLE.
66044	11.3	4-10 MM	107-17514 XSB	06 02 16 36	LMP SEE ANYTHING DOWN UNDER THERE, JOHN?
			107-17515 XSB	06 02 16 45	CDR NO. THIS IS THE SECOND - THIS IS RIM OF IT. IT'S VERY SOFT. I DIDN'T HAVE ANY TROUBLE DIGGING DOWN WITH THE SHOVEL.
			107-17516 XSB		
			107-17517 XSA	06 02 16 56	LMP SOLID GRAY ALL THE WAY - -
				06 02 16 57	CDR SOLID GRAY ALL THE WAY DOWN. I SEE NO LAYERING.
				06 02 17 01	LMP LET ME PUT THIS IN YOUR BAG.

BAG 339		SOIL, INDURATED, WHITE	108-17628 DSB	06 02 17 15	LMP THIS MIGHT HAVE BEEN A SECONDARY.
			107-17518 XSB	06 02 17 17	CDR LOOK AT THAT RIGHT OVER THERE, CHARLIE.
			107-17519 XSB	06 02 17 18	LMP IT'S A REALLY UNIQUE WHITE-LOOKING SOMETHING-OR-OTHER.
			107-17520 XSA		
			108-17629 LOC	06 02 17 32	LMP I THINK IT'S SOIL.
66080	106.1	RESERVE FINES		06 02 17 40	CDR WELL, YOU WANT TO GET SOME OF IT? IT'S UNUSUAL SOIL, IF IT IS.
66081	177.3	< 1 MM			
66082	9.85	1-2 MM		06 02 17 45	LMP IT LOOKS LIKE A LITTLE TEENY IMPACT, DOESN'T IT?
66083	4.53	2-4 MM		06 02 17 56	LMP HIY, LET'S GET A QUICK ONE AND THEN GO ON UP HERE AND GET SOME OF THESE BLOCKS ON THE UPPER RIN.
66084	3.13	4-10 MM			
66085	3.66	FRAGMENT			
66086	2.03	FRAGMENT		06 02 18 28	LMP GOT YOU A BAG COMING, JOHN. HEY, TONY, WHAT WE'RE PICK'NG UP IS A WHITT - IT LOOKS LIKE A LITTLE PATCH OF INDURATED REGOLITH, AND IT'S WHITTISH IN COLOR.
				06 02 18 51	LMP LET'S GET A LITTLE BIT MORE OF THE WHITE, JOHN. THAT GOT MOST OF IT; IT WAS JUST ON THE END OF THE SCOOP.
				06 02 19 24	LMP THAT'S GOT IT. I'LL GET YOUR AFTER.
				06 02 19 27	CDR I'LL GET IT, CHARLIE.
				06 02 19 28	LMP OKAY, THAT'S IN BAG - THAT SOIL SAMPLE IN 339.

BAG 409 347.1 WHITE, SUBROUNDED
 66075 108-17630 DSB
 107-17521 XSB
 107-17522 XSB
 108-17631 LOC

06 02 20 02 CDR I BEEN HANKERING FOR A PIECE OFF THAT ROCK.
 06 02 20 05 LMP HERE'S AN OLDROUNDED ONE RIGHT HERE, JOHN. WITH
 THE WHITE SPOTS - IN IT. HERE'S A REAL ANGULAR ONE
 RIGHT OVER HERE.
 06 02 20 20 CDR LET'S GET THIS ROUNDED ONE, CHARLIE - -
 06 02 20 24 LMP OKAY, I AGREE. DOWN-SUN, HERE.
 06 02 20 38 LMP GOT IT.
 06 02 20 39 CDR WAIT A MINUTE. GET A LOCATOR
 06 02 21 12 CDR IN BAG 409, HOUSTON. AND IT'S SO DUST-COVERED THAT
 I'M UNABLE TO DESCRIBE IT, ALTHOUGH IT'S A WHITE
 SUBROUNDED ROCK. AND I CAN'T DISTINGUISH ANY
 CRYSTALLINE STRUCTURE IN IT. IT'S GOING IN BAG 409.
 CHARLIE, PUT THAT ONE IN MINE. YOURS IS FULL.

BAG 410 66095* ROCK
 107-17523 XSD
 107-17524 XSD
 107-17525 USD
 108-17632 XSD
 108-17633 XSD
 107-17526 LOC

06 02 21 56 LMP BRING ME THE SCOOP A MINUTE. LET ME WHACK THIS
 THING RIGHT HERE. IT'S SO GOOD THAT I CAN'T PASS
 IT UP. ALL RIGHT, THERE'S A GOOD PLACE TO WHACK.
 06 02 22 15 CDR OH, THAT'S HARD - YOU GOT IT!
 06 02 22 18 CDR DEMOLISHED IT.
 06 02 22 19 LMP THAT'S A GREAT ROCK! LOOK AT THAT! I'M SORRY
 WE DIDN'T GET IT DOCUMENTED BEFORE, BUT THAT IS
 A GOOD SAMPLE. I THINK IT'S A CRYSTAL ROCK.
 06 02 22 32 CC OK, LET'S GO AHEAD AND DOCUMENT IT NOW - -
 06 02 22 34 CC -- SO WE GET THE LOCATION OF THE ONE THAT'S STILL
 IN PLACE. IT DIDN'T LOOK LIKE IT MOVED.
 06 02 22 40 CDR NO, HE DIDN'T MOVE ANYTHING THERE. I'M GONNA DO AN
 UP-SUN ON THIS DOCUMENTATION.
 06 02 22 44 LMP OK, I'LL GET A CROSS-SUN HERE. IT'S A GRAYISH
 BLUISH - ROCK, TONY, IN THE MATRIX WITH SOME WHITE
 CLAST IN IT.
 06 02 23 06 LMP LET ME GET IT WITH THIS - IT ISN'T ANY TROUBLE,
 JOHN.
 06 02 23 22 LMP THE MATRIX IS SO FINE-GRAINED, I CAN'T TELL, BUT
 IT'S DEFINITELY GOT A BLUE CAST TO IT AND THERE
 ARE INCLUSIONS OF A WHITISH - IT LOOKED LIKE PLAG
 TO ME.
 06 02 23 45 CDR AND THEN, NEEDLE-LIKE BLACK CRYSTALS IN IT, TOO!
 06 02 23 49 CDR I SEE ONE IN THERE THAT'S A MILLIMETER WIDE BY 3
 MILLIMETERS LONG, AND SOME OTHER NEEDLE-LIKE
 CRYSTALS IN IT.
 06 02 23 58 LMP HERE'S ANOTHER PIECE - CAME OFF THE SAME ROCK.
 06 02 24 02 CDR IT HAS THIS WHITE CLAST IN IT. IT'S GOT TO BE
 A BRECCIA, CHARLIE.
 06 02 24 07 LMP THINK SO?
 06 02 24 09 LMP THEY DON'T REALLY LOOK LIKE --
 06 02 24 13 CDR THAT'S GOING IN BAG 410.
 06 02 29 36 LMP LOOK AT THAT BLUE ROCK - THAT WE JUST WHACKED ON!

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE WEIGHT SAMPLE TYPE LUNAR-SURFACE NET CREW COMMENTS
NUMBER (G) PHOTOGRAPHS
EVA 2 - TRAVERSE, STATION 6 - 8

06 02 33 37	LMP			THIS IS REALLY A RAY. COMING OUT OVER THE RIDGE - YOU CAN DISTINCTLY SEE THE RAYS FROM SOUTH RAY - THE WHITER ALBEDO AND THE CONTACT BETWEEN THE WHITE RAY AND THE CAYLEY HERE. QUIITE APPARENT.
06 02 34 42	CDR			THAT'S THE FIRST ROCK I'VE SEEN WITH VESICLES
06 02 38 10	LMP			HOW ABOUT STOPPING UP THERE IN THE MIDDLE OF ALL OF THOSE BIG BOULDERS, JOHN?
06 02 38 25	CDR			CALL THAT STATION 8? THAT'S CONNA BE ABOUT IT.
06 02 38 16	LMP			CALL THAT STATION 8. THAT'S CONNA BE ABOUT IT.
06 02 38 50	LMP			THERE'S ONE THAT'S OVERTURNABLE, I'LL BET YOU. RIGHT THERE. LOOK AT THAT ELONGATE ONE.
06 02 39 12	LMP			OK, TONY, WE'RE AT 010 AND 3.0, AND WE'VE GOT ABOUT THREE OR FOUR - 2- OR 3-METER-SIZE BLOCKS, ONE BLACK AND SOME WHITE ONES.
06 02 43 23	LMP			AND THE REGOLITH HERE, IS FIRMER THAN UP ON - STONE. WE'RE IN A BLOCKY FIELD HERE. PREDOMINANT SIZE IS 10 TO 15 CENTIMETERS, BUT THE BIGGEST ONE IS A COUPLE OF METERS. AND YOU'LL SEE THAT 12 O'CLOCK FROM THE ...
06 02 43 51	LMP			IT HAS A ... CAST TO IT - BLACK MAYBE. OK, YOU ALREADY ... HUH? AND BEYOND THAT, THERE'S A WHITE ONE. IT LOOKS LIKE THAT BIG ONE THAT JOHN SAMPLED. THINK WE OUGHT TO GET ONE OF THOSE. OK; PAN'S COMPLETE. DOUBLE CORE HERE IS THE FIRST THING. AND I'LL SAMPLE - I THINK WE'RE IN THE RAY, SO I'LL JUST SAMPLE - RIGHT OUT - DO IT RIGHT OVER HERE.
06 02 47 47	CC			HOW NEAR ARE YOU TO THE EDGE OF THIS RAY?
06 02 47 56	LMP			GOES IN BOTH DIRECTIONS AS FAR AS WE CAN SEE.
06 02 48 01	LMP			THE WHOLE AREA IS JUST COVERED WITH THESE ROCKS.
06 02 48 21	CC			I GUESS WE'RE JUST LOOKING FOR A VARIETY THEN IN THE BOULDER PROTOCOL.
06 02 48 28	LMP			OK, WE CAN GIVE YOU THAT, I'LL TELL YOU. THERE'S TWO BIG BOULDERS AT 12 O'CLOCK THAT ARE GOING TO BE A GREAT SAMPLING. ONE OF THEM IS A ROUNDED AND - BUT THE BIGGEST - AND THE OTHER ONE IS A WHITE - AND IT'S BLACK. THE OTHER IS WHITE AND IT'S VERY SHARP, VERY ANGULAR.

EVA 2 - STATION: 8

U29/L36
68002/
68001*
DOUBLE DRIVE TUBE 583.5/
08-17682 XSB
108-17683 XSB
06 02 48 58 LMP
OK, I PUSHED THE DOUBLE CORE IN ABOUT HALFWAY UP
THE FIRST.
06 02 49 58 CDR WHAT'S THE MATTER, CHARLIE?
06 02 50 01 LMP NOT GOING IN TOO WELL.
06 02 50 05 CDR PRETTY HARD AROUND HERE.
06 02 50 55 LMP AND THE HAMMER. I DON'T THINK THE DOUBLE CORE IS
GOING TO GO IN. DO YOU WANT ME PULL IT OUT AND
SHAKE IT OUT AND TRY ANOTHER PLACE? I THINK I HIT
A ROCK --
06 02 51 06 CC OK, YEAH, WE'D SURE LIKE YOU TO DO THAT.
06 02 51 08 LMP THAT ONE JUST STOPPED ALL AT ONCE, SO I THINK I DID
HIT A ROCK.
108-17684 XSD
108-17685 XSD
108-17686 XSD
107-17529 LOC
06 02 54 46 LMP BOY, IT IS HARD UNDER HERE, TONY.
06 02 54 49 CC RIGHT, IT SURE LOOKS IT, BUT I CAN SEE YOU'RE
GETTING IT DOWN.
06 02 54 50 LMP ...IT'S IN.
06 02 54 58 LMP IT'S A LITTLE OFF VERTICAL, BUT YOU'RE JUST GOING
TO HAVE TO TAKE IT.
06 02 55 03 LMP THAT WAS A HARD ONE. WHEW!
06 02 55 23 LMP I CAN'T BELIEVE IT. IT COMES OUT SO EASY.
06 02 58 25 LMP THE BOTTOM CORE WAS 36 AND THE TOP PART IS 29.

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BAG #11
68510*
RAKE FRAGMENTS
107-17530 DSB
107-17527 XSB
107-17528 XSB
107-17531 DSA
107-17529 LOC
06 02 47 05 CDR OK, WELL I CAN GET A RAKE SOIL HERE WHILE YOU'RE
DOING THAT (DOUBLE CORE).
06 02 47 24 CDR RAKE SOIL AWAY FROM THE BOULDER'S.
06 02 52 05 CDR OUT OF FIVE SCOOPS, I'VE GOT ABOUT 10 ROCK FRACS,
ONE OF WHICH HAS SOME INTERESTING BLACK GLASS ALONG
THE SIDES OF IT, THE OTHER OF WHICH IS COVERED WITH
BLACK GLASS - BUT IN THE MOST THERE'S NOT MUCH OF
THAT MATERIAL AROUND HERE. THAT'S GOING INTO BAG
#1.
06 02 52 39 CDR WHERE YOU'RE AWAY FROM BOULDERS THERE'S HARDLY ANY
THING BUT SOIL - VERY FEW ROCKS, I'V OTHER WORDS.
BAG #12
68500*
RAKE SOIL
107-17527 XSB
107-17528 XSB
107-17533 XSA
107-17530 DSB
107-17531 DSA
107-17529 LOC
06 02 53 50 LMP HEY, THERE ARE LITTLE GLASS BEADS ALL OVER THE
PLACE HERE, JOHN.
06 02 53 53 CDR AND PLACES WHERE LITTLE WHITE ROCKS SEEM
TO HAVE HIT, TOO. I'LL GET A SOIL SAMPLE HERE.
06 02 53 41 CDR OK, THE SOIL SAMPLE HERE IS GOING IN BAG #12.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	L. SURFACE PHOTOGRAPHS	AET	CDR	CREW COMMENTS
EVA 2 - STATION: 8						
BAG 413 66035*		BLACK GLASS	107-17532 XSB 107-17533 XSB 107-17534 XSB 107-17535 XSB 107-17536 LOC 107-17537 LOC	06 02 56 13 06 02 56 24 06 02 56 45 06 02 58 01	CDR CDR LMP CDR	I DON'T KNOW WHAT THIS IS STARING HERE AT ME HERE, BUT I'M GOING TO PICK IT UP. IT'S A GLASS, BUT IN THIS SUNLIGHT, IT'S REFLECTING RED, GREEN LIKE A RAINBOW. FOUND THE FIRST PRISM ON THE MOON, JOHN. I DON'T KNOW IF THAT THING WILL LAST OR NOT. NO, I GUESS IT WAS JUST BLACK GLASS BUT IT WAS THE WAY THE SUN WAS REFLECTING OFF OF IT. ISN'T THAT TOO BAD? ANYWAY, THAT'S A SAMPLE - AND IT'S GOING IN BAG 413.
				06 03 03 02	LMP	THERE'S A LOT OF GLASS AROUND HERE.
BAG 340 68115	1190.0	SOCK, BRECCIA	107-17541 XSB 107-17542 XSB 107-17543 XSB 107-17544 XSB 107-17545 XSB 107-17546 XSB 107-17547 XSA	06 03 08 01 06 03 08 42 06 03 08 45 06 03 08 48	LMP CDR LMP CDR	THIS IS REALLY SOME ROCK. IT'S A TWO-ROCK BRECCIA, WITH THE MATRIX BEING BLUE TO ME, IN THIS LIGHT ANYWAY, AND THE WHITE CLASTS ARE FRAGMENTS OF CRYSTALLINE ROCKS - THAT APPEAR TO BE FAIRLY COARSE-GRAINED - TAKE THAT BACK - LET'S SAY, FINE-GRAINED - THAT'S THE ONE YOU WANT TO TURN OVER, CHARLIE. THIS THING! GOSH! I CAN'T EVEN BUDGE IT. IT'S A BIGGIE.
				06 03 10 11	LMP	YEAH, I GOT THE HAMMER, AND I'M BRINGING THE TONGS AND THE SCOOP FOR A LITTLE FILLET SAMPLE AROUND IT.
				06 03 10 23	LMP	WE MIGHT THINK OF A PADDED BAG SAMPLE HERE. THIS BIG ONE'S A BRECCIA, BUT THE OTHER ONE LOOKS LIKE A CRYSTALLINE ROCK.
				06 03 10 54	CC	OK, WHY DON'T YOU TRY TO CHIP OUT SOME OF THOSE CLASTS THERE, AND WE WON'T WORRY ABOUT OVERTURNING THIS ONE, BUT MAYBE YOU CAN GET A FILLET HERE. IF YOU HAVEN'T MESSED UP THE FILLET BY GETTING IN THERE TOO CLOSE.
				06 03 11 30	LMP	OK. JOHN, LETS FIND A GOOD PLACE TO WHACK.

06 03 13 35 LMP WE GOT TO FIND A PLACE TO CL... THAT.
 06 03 13 44 CDR HERF'S A PLACE THAT'S HANGING OUT, CHARLIE.
 06 03 14 06 LMP OK. THAT LOOKS GREAT. GOT TO HIT IT, IT LOOKS
 LIKE.
 06 03 14 13 CDR YEAH, BUT IT'S RIGHT AT A FRACTURE, SO IT'LL
 COME OFF IN GOOD SHAPE.
 06 03 14 20 LMP MAN, THE WHOLE ROCK'S COMING APART. SUPER JOB,
 JOHN.
 06 03 14 30 CDR IT WAS ONE OF THOSE FRACTURES THAT'S
 ALL INCLUDED WITH GLASS.
 06 03 14 39 CDR SEE THOSE GLASS FRACTURES THAT - -
 06 03 14 47 LMP YEAH - IS GOING IN 340.

BAG 374
 68120 107-17541 XSB FILLET SOIL
 68121 107-17542 XSB
 68122 88.7 141.9 RESERVE FINES
 68123 10.92 <1 MM
 68124 7.36 1-2 MM
 8.65 2-4 MM
 4-10 MM

06 03 10 11 LMP YEAH, I GOT THE HAMMER, AND I'M BRINGING THE TONGS
 AND THE SCOOP FOR A LITTLE FILLET SAMPLE AROUND
 IT.
 06 03 11 33 CDR LET'S GET THE FILLET FIRST, THOUGH -
 ACTUALLY, I DON'T SEE ANY FILLET, PER SE.
 06 03 11 41 CDR I THINK IT JUST HIT AND MADE A - STICK IT IN
 THE DIRT. ***END IT UP IN THE DIRT, CHARLIE.
 *** TELL WHICH WAY IS UP. HOW ABOUT RIGHT THERE?
 *** CROSS-SUN STEREO, WHERE ARE YOU GONNA***...
 OK. JUST TAKE A PICTURE OF IT AND I'LL HOLD THE
 SCOOP END.
 06 03 12 21 CDR ***STANDING IN THE SHADOW, CHARLIE. GET THE
 AFTER, CHARLIE.
 06 03 12 27 LMP HUH?
 06 03 12 29 CDR GET IT IN THE AFTER.
 06 03 12 45 CDR OK, HERE WE GO. MAN, YOU CAN'T SEE ANYTHING
 WITH ***DOWN IN THE SHADOW LIKE THAT. THERE WE
 GO. HEY, JOHN, HERE'S A LITTLE PIECE JUST
 SITTING UP HERE ON TOP OF THE ROCK.
 THAT SAMPLE'S IN BAG 374.

BAG 341,
 342
 68415,1 108-17697 DSB ROCK CHIPS FROM
 68415,2 107-17548 XSB CRYSTALLINE
 68416 107-17549 XSB BOULDER
 202.5 107-17550 XSA
 168.6 108-17698 XSA
 178.4

06 03 15 57 LMP LOOK AT THAT BEAUTY, JOHN! THAT IS A CRYSTALLINE
 ROCK, NO BRECCIA.
 06 03 16 03 CDR A NO-BRECCIA, CRYSTALLINE ROCK, HUH?
 06 03 16 07 LMP AND IT IS WHITISH TO GRAY, WITH A LOT OF ZAP FITS
 IN IT.
 06 03 16 14 CDR THOSE ARE ZAP FITS, AREN'T THEY?
 06 04 16 24 LMP YEAH. IN FACT, THE WHOLE AREA - THERE'S A LOT OF
 THIS ROCK HERE, SCATTERED ALL OVER - SCATTERED
 AROUND.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AFT	CREW COMMENTS
EVA 2 - STATION: 8					
06 03 16 55	CDR				WHERE DO YOU WANT A SAMPLE FROM?
06 03 16 57	LMP				SEE THAT SHARP CORNER? RIGHT UP AT THE TOP THERE?
06 03 17 00	CDR				OFF THE TOP?
06 03 17 02	LMP				YEAH.
06 03 17 06	CDR				OK. ***THINK I CAN GET THAT. IT'S FRACTURED RIGHT THERE.
06 03 17 27	CDR				WELL, IF THAT AIN'T PURE PLAG, I NEVER SEEN IT.
06 03 17 31	LMP				DON'T IT LOOK LIKE PURE PLAG TO YOU?
06 03 17 32	CDR				I DON'T KNOW WHAT IT IS, THOUGH.
06 03 17 35	LMP				IT'S PURE FELDSPAR, LOOKS LIKE - -
06 03 17 38	CDR				PURE FELDSPAR. DON'T IT LOOK LIKE IT'S BEEN - IT'S SO SANDY LOOKING, IT COULD HAVE BEEN REMORCKED OR SOMETHING.
06 03 17 48	LMP				MAYBE PARTIALLY SHOCKED.
06 03 17 49	CDR				SHOCKED, YEAH.
06 03 17 51	LMP				BUT IT'S PURE PLAG - IT'S PLAG, TONY.
06 03 17 56	LMP				AND IT'S IN 341. WHACK OFF - ANOTHER PIECE RIGHT HERE, JOHN.
06 03 18 03	LMP				THIS ROCK IS PRETTY PREDOMINANT.
06 03 18 08	CDR				NO, IT ISN'T FRIABLE; IT JUST FRACTURED.
06 03 18 12	CDR				WHERE DO YOU WANT TO HIT IT OFF, CHARLIE?
06 03 18 14	LMP				RIGHT AT THAT SHARP - RIGHT THERE; YEAH.
06 03 18 22	CDR				SEE HOW THAT COMES OFF. PRETTY FRIABLE ISN'T IT? YEAH. BET IT'S SHOCKED.
06 03 18 25	LMP				YEAH.
06 03 18 32	CDR				PUT THAT IN THE SAME BAG?
06 03 18 33	LMP				YEAH, LET'S PUT THEM ALL - AND THERE'S ANOTHER PIECE DOWN THERE.
06 03 18 43	CDR				OKAY, THE FIRST TWO PIECES - THE FIRST PIECE WAS OFF THE TOP OF THE ROCK, THE SECOND PIECE IS UNDER THE SHADOW OF THE SHOVEL, AND THEY'RE BOTH GOING IN BAG NUMBER WHATEVER CHARLIE SAYS. 341.
06 03 18 56	LMP				WE'RE GONNA HAVE ANOTHER PIECE THAT CAME OUT OF THE SAME - THE SECOND WHACK.
06 03 18 58	LMP				JOHN, LET'S PUT THIS OTHER PIECE IN ANOTHER BAG, BECAUSE THIS ONE WAS GOT NO DUST IN IT AT ALL.
06 03 19 08	LMP				THE OTHER PIECE OF THAT ROCK'S GOING IN 342.
06 03 19 43	LMP				I SEE AT LEAST 10 OTHER ROCKS AROUND HERE THAT HAVE THAT SAME APPEARANCE, SO IT'S NOT A COMPLETELY ANOMALOUS ROCK.

BAG 375
68820*

FILLET SOIL

108-17699 XSB
108-17700 XSB
108-17701 XSA

06 03 21 30 CC I'M NOT SO SURE WE GOT A GOOD FILLET ON THIS LAST
ONE, SO WE MIGHT BE WILLING TO SAMPLE ANOTHER.
-- --
06 03 22 18 LMP OKAY, THEN WE'LL SEE IF WE CAN MOVE IT. I DON'T
THINK, WE CAN. IT'S GOT A PRETTY BIG BASE TO IT.
OKAY, 7 FOOT AT F/8. I GOT IT. HEY, I - GOT A
GOOD FILLET AROUND IT.
IT DOES.
IT DOESN'T HAVE ANY DUST ON THE TOP OF IT. I
THOUGHT WE COULD GET THE FILLET SAMPLE HERE, BUT
IT DOESN'T HAVE ANY DUST ON THE TOP.
WE DON'T NEED DUST FROM THE TOP. IF THIS IS A
BETTER FILLET THAN THE OTHER, YOU MIGHT TAKE A
SOIL SAMPLE THERE, AND THEN A REFERENCE SOIL AWAY,
AND THEN A CHIP OFF THE ROCK, AND WE'LL HAVE A
GOOD FILLET SAMPLE.
OKAY, THIS IS A BETTER - THIS IS A BETTER FILLET
THAN THE OTHER ONE.
OKAY, BUT I THOUGHT YOU DIDN'T WANT BRECCIA.
JUST CRYSTALLINE OR TOUGH BRECCIA FOR FILLET SAMPLE.
I DON'T KNOW WHETHER IT'S TOUGH OR NOT. YOU MEAN
HARD.
06 03 23 09 LMP YEAH, HARD ... LET'S TRY IT, JOHN, OKAY?
WE'LL FILL THAT SQUARE. OKAY, FILLET COMING IN
FROM THIS SIDE. THERE'S A GOOD ONE RIGHT OVER
HERE. ALREADY GOT THE CROSS-SUN.
06 03 23 32 LMP MY PERSONAL GUESS IS THAT THE FILLET DIDN'T COME
OFF THAT ROCK.
06 03 23 36 LMP MINE, TOO; 375.
-- --
06 03 23 57 CDR I GOT A FOOTPRINT IN, BUT THE SCOOP WILL BE RIGHT
WEST OF WHERE THE FILLET WAS TAKEN.
-- --

FSR-6
68815

ROCK
CHIP FROM BRECCIA
BOULDER

1791.0

108-17699 XSB
108-17700 XSB
108-17701 XSB

06 03 24 35 CDR OKAY, LET'S GET THE CHIP.
-- --
06 03 25 05 LMP THAT'S A HARD BRECCIA, AIN'T IT?
06 03 25 06 CDR A HARD, HARD ROCK.
06 03 25 10 LMP HIT IT RIGHT HERE ON THIS CORNER RIGHT HERE IN THE -
YOUR SHADOW NOW. DOWN A LITTLE BIT. THERE YOU GO.
-- --
06 03 27 05 LMP I DON'T THINK THEY'LL EVER RECOGNIZE IT AGAIN.
06 03 27 07 CDR OH, YEAH; THROW IT IN MY BAG.
06 03 27 11 LMP LET'S - OKAY. OKAY, TONY, THAT FILLET - THAT CHIP
OFF THAT BLOCK - -
06 03 27 22 CDR OKAY, AND IT OPENED UP A CLEAR FILLET, AND THERE'S
A LOT OF - THIS IS A VESICULAR TYPE OF BRECCIA ...
-- --

BAG 343
68815.2

ROCK CHIP
FROM BRECCIA
BOULDER

34.49

SAME AS
FSR-6

06 03 27 36 LMP ANOTHER PIECE THAT FELL OFF HERE.
06 03 27 39 LMP WELL, I WAS GONNA PUT IT IN A SACK SO THEY'LL MAKE
SURE - ALL THAT HAMMERING, I DON'T WANT THEM TO
LOSE IT. YEAH.
06 03 27 50 CDR HEY, LET'S PUSH IT OVER.
06 03 27 52 LMP DON'T THINK WE CAN. OKAY, THAT CAME OFF THE ROCK
RIGHT THERE. OKAY, TONY, A LOOSE PIECE OFF THE
SIDE OF THE ROCK IS GOING IN BAG 343.
06 03 28 15 CDR ***TO PUSH THAT ROCK.
-- --

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 8					
BAG 3#		SOIL	108-17702 DS	06 03 29 31	LMP WE GOT TO GO OFF 5 METERS AND GET A REFERENCE SOIL.
68840*			107-17555 XSB		
			107-17556 XSB		
			107-17557 XSA	06 03 30 04	CDR I THINK THE REFERENCE SOIL IS BACK THERE AT THE SOIL SAMPLE.
			108-17702 LOC	06 03 30 08	LMP OKAY, HERE'S 5 - HERE'S A PRETTY PRISTINE AREA RIGHT OVER HERE, JOHN, WE HAVEN'T BEEN WALKING - WE CAN JUST GO OVER HERE AND GET IT. TAKE THE SHOVEL DOWN THERE AND I'LL - IS THAT 5 METERS. YEAH, THAT'S ABOUT 5 METERS. FIFTEEN FEET, BABY.
				06 03 30 24	CDR - - - YEAH, UH-HUH. OKAY, TONY; IS ONE SCOOPFUL ENOUGH?
				06 03 31 10	LMP YEAH, UH-HUH. OKAY, TONY; IS ONE SCOOPFUL ENOUGH?
				06 03 31 18	CC ROGER. ONE SCOOPFUL.
				06 03 31 32	LMP GOT A LITTLE GLASS BEAD IN IT, JOHN.
				06 03 31 36	LMP THAT'S GOOD. WENT RIGHT IN. OKAY, THAT ONE SHOVELFUL, IS IN 344.
				06 03 31 56	LMP PUT IT IN MY BAG, JOHN. YOURS IS FULL.
EVA 2 - STATION: 9					
SURFACE SAMPLES		SPECIAL SURFACE SAMPLES	108-17740 DS	06 03 56 45	LMP OKAY, PAN IS COMPLETE. OKAY, WE NEEDED THE SURFACE SAMPLERS. AND THAT STARTS WITH THE BETA AND THEN THE VELVET AND THEN A SKIM AND A SCOOP.
69003*			107-17559 XSA	06 03 57 04	CDR HEY, WE SNIPPED THAT ROCK OVER THERE, THE ONE I'M GONNA SNEAK UP ON, CHARLIE.
69004*			107-17560 LOC	06 03 59 03	LMP IF YOU'LL PAN LEFT, WE'LL SHOW YOU THE ROCK WE'RE GOING TO SNEAK UP ON.
			108-17741 LOC	06 03 59 26	CDR IT'S BETWEEN US AND THE LM. IT'S BETWEEN THE LM AND US.
				06 03 59 30	LMP THEY DON'T WANT YOU TO OPEN THIS THING UNTIL YOU GET RIGHT UP NEXT TO THE ROCK.
				06 03 59 40	LMP I'M GOING TO GET THE OTHER ONE.
				06 04 01 51	CC OKAY. DID THAT DISTURB THE REFERENCE ON THE OTHER SIDE THERE?
				06 04 02 06	CDR ... NO, WE DIDN'T DISTURB IT AT ALL.
				06 04 03 03	LMP BEAUTIFUL. YOU PICKED SOME UP ON THAT ONE. ONLY ON ONE CORNER. HE GOT SOME ON ONE CORNER, HOUSTON.
				06 04 03 19	LMP I'D SAY ABOUT 20 PERCENT OF IT IS COVERED.

BAG 376
69920*

SPECIAL
SURFACE
SAMPLES
SKIM SOIL

108-17740 DS
107-17558 XSB
107-17559 XSB
107-17561 XSD
107-17562 XSD
107-17563 XSD
107-17560 LOC
108-17741 LOC

06 04 06 05 LMP WE GOT TO GET A SKIM.
06 04 06 17 CDR CAN WE SKIM WHERE THE PRISTINE SAMPLE WAS?
06 04 06 19 CC WE'D LIKE TO SKIM NEXT TO IT.
06 04 06 20 LMP NO, THEY WANT IT RIGHT BESIDE IT, RIGHT THERE ...
06 04 06 23 CDR YOU CAN'T SEE ANY OF THAT STUFF.
06 04 06 24 LMP YEAH, I CAN SEE. OK, HERE WE GO. GET ME A BAG
READY.
06 04 06 48 LMP TONY, I PROBABLY GOT 5 MILLIMETERS ON THAT SKIM.
06 04 06 59 CDR WHAT SETTING SHOULD I OPEN THIS UP TO SHOW YOU
THESE PRINTS WE GOT IN THE VACUUM HERE? I MEAN
IN THE SHADOW?
06 04 07 23 CDR THAT'S GOING INTO BAG 376?

BAG 377
69940*

REFERENCE SOIL

06 04 07 52 CDR OK. I'LL GET YOU A LITTLE FLIGHT LINE OF THAT.
06 04 08 10 LMP CHARLIE'S SCOOP IS BEING TAKEN RIGHT UNDER THE-
06 04 08 28 LMP YOU GOT IT.
06 04 08 28 LMP OK, THERE YOU GO. THAT'S GOING IN BAG 377.

CSVC-34
69001 **558.3**

SINGLE DRIVE TUBE
(IN CORE SAMPLE
VACUUM CONTAINER)

108-17742 XSD
108-17743 XSD

06 04 08 33 CC WE'D LIKE TO GET THAT CSVC.
06 04 10 56 LMP MAY I BORROW YOUR HAMMER, JOHN? THIS CORE, I
THINK MIGHT BE ABLE TO PUSH IT IN, BUT -
06 04 11 07 LMP OK, WE'LL JUST DO IT RIGHT HERE. TONY, I'M
15 METERS OUT TO THE LEFT OF THE - -
06 04 11 18 CC ROGER. WE'RE WATCHING YOU, CHARLIE.
06 04 11 31 LMP OK, THERE WE GO. PUSH IT IN HALFWAY, TONY.
06 04 11 36 CC OK. AND REMEMBER NOT TO HAMMER THIS ONE ALL
THE WAY IN.
06 04 12 16 LMP OK, TONY, THAT'S ABOUT 7 CENTIMETERS OUT.
06 04 12 19 CC LOOKS GOOD TO US.
06 04 12 25 LMP FEELS GOOD TO ME, TOO, TO GET THAT OVER.
06 04 14 18 LMP HEY, JOHN, LET ME CAP THIS LITTLE BEAUTY HERE
BEFORE WE LOSE IT - BEFORE I FORGET ABOUT IT.
06 04 20 43 LMP THE PLUNGER WENT RIGHT DOWN. IT'S ABOUT 4
CENTIMETERS FROM THE TOP.
06 04 21 06 CC AND BEFORE YOU STICK IT IN THERE, COULD WE HAVE
THE CORE TUBE NUMBER?
06 04 21 12 LMP THIRTY-FOUR.
06 04 22 54 CC ALL RIGHT CHARLIE, THAT CSVC GOES IN THE SRC.

BAG 378
69935*

CHIP FROM TOP OF
BRECCIA BOULDER

107-17558 XSB
107-17559 XSB
107-17572 XSA
107-17560 LOC
107-17561 XSB
107-17562 XSB
107-17563 XSB

06 04 11 46 CDR THE TOP OF THAT ROCK IS A HARD BRECCIA, AND
I'M JUST GOING TO THROW IT UNDER YOUR SEAT,
CHARLIE.
06 04 11 58 LMP IS IT IN A BAG?
06 04 11 59 CC DID YOU HAVE A BAG NUMBER?
06 04 12 03 CDR 373. (378)
06 04 12 30 CDR YEAH, THAT'S GOT IT ALL - ON THREE SIDES.
06 04 12 58 CDR HERE'S THE PICTURE TO SHOW WHERE THE TOP ROCK
CAME OUT. CHARLIE, I GOT IT!

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 2 - STATION: 9					
BAG 379					
69960*					
		SOIL BENEATH BOULDER	107-17575 DSB	06 04 13 14 LMP	HE DID IT, HOUSTON! HE DID IT.
			107-17576 DSB	06 04 13 23 CC	SO YOU CAN NOT ONLY SNEAK UP ON THEM, YOU CAN FLIP THEM OVER, HUH?
			107-17573 XSB	06 04 13 31 CDR	YEAH. THAT'S A BIGGIL. HA!, IT LOOKS LIKE IT'S BEEN SITTING THERE FOR QUITE A WHILE. LOOK AT THAT SOIL UNDERNEATH.
			107-17577 XSA	06 04 13 43 CDR	BEFORE I STOMP ALL OVER IT, CHARLIE, SNEAK OVER HERE AND LET'S GET SOME OF THIS SOIL.
			107-17578 XSA	06 04 14 44 CDR	HEY, WHY DON'T YOU JUST SORT OF SNEAK UP SO YOU DON'T SPRINKLE ANY DIRT DOWN IN THE BOTTOM OF THIS PLACE WHERE WE TURNED IT OVER.
			107-17579 XSA	06 04 14 50 LMP	YEAH, OK.
			107-17574 XSB	06 04 14 52 LMP	LOOK AT THAT SOIL! IT'S ALL CAKED LOOKING, ISN'T IT YEAH, IT IS.
			107-17578 XSB	06 04 14 54 CDR	YEAH, IT IS.
			107-17579 XSA	06 04 15 01 LMP	OK. LET ME GET THE SOIL BEFORE YOU START WHACKING. OK?
			107-17580 XSA	06 04 15 04 CDR	YEAH.
			107-17576 DSB	06 04 15 32 LMP	AND IT LOOKS JUST LIKE AN ALKALI FLAT IN THE CAKE THAT'S UNDER IT, TONY. AND THAT'S RIGHT FROM THE DEEPEST PART. THAT SAMPLE IS RIGHT IN THE MIDDLE, WHICH HAPPENS TO BE THE DEEPEST PENETRATION THAT BOULDER MADE.
			107-17577 XSB	06 04 16 02 LMP	THERE'S A SACKFUL. 379.
BAG 380					
69955*					
		CHIP FROM BOTTOM OF BOULDER	107-17575 DSB	06 04 16 29 LMP	WHERE ARE YOU GOING TO WHACK IT, JOHN?
			107-17576 DSB	06 04 16 37 LMP	OK. REAL FRIABLE, ISN'T IT?
			107-17574 XSB	06 04 16 50 LMP	AHA! LOOK AT THAT PIECE HERE, LET ME GET IT, JOHN. BACK UP. I'LL GO GET IT. THERE IT IS RIGHT THERE.
			107-17577 XSB	06 04 17 10 CDR	CAN'T YOU JUST PICK IT UP WITH YOUR SHOVEL?
			107-17578 XSB	06 04 17 12 LMP	I DON'T WANT TO GET IT TOO DIRTY.
			107-17579 XSA	06 04 17 21 LMP	OK, WE GOT YOU ABOUT A 4-CENTIMETER CHIP.
			107-17579 XSA	06 04 17 38 LMP	AND THAT'S NOT GLASS, JOHN. THOSE ARE CRYSTALS. THOSE ARE BIG CRYSTALS. AT LEAST 5 MILLIMETERS, WITH A BLuish CAST TO THEM.
			107-17579 XSA	06 04 17 59 CDR	THAT'S GOING IN BAG 380, HOUSTON.
			107-17579 XSA	06 04 18 07 CDR	IT LOOKS TO ME LIKE IT'S A SHOCKED ROCK WITH A LOT OF - AND THAT'S IS A GUESS - A LOT OF BLACK CLASS IF THE FRACTURE PATTERNS.

EVA 2 - STATION: 10

U45/154
60010/
60009

DOUBLE DRIVE TUBE
635.3/
759.8

115-18555 XSB
115-18556 XSB
115-18557 XSD
115-18558 XSD

06 04 59 44 CDR DOUBLE CORE. OK, CAN BE ANYWHERE OUT IN FRONT
OF THE ROVER.
06 05 00 29 CDR WANT ME TO HELP YOU WITH THE PENETROMETER?
06 05 00 32 LMP WELL, I'VE GOT THE DOUBLE CORE RIGHT NOW.
06 05 00 46 LMP I BET YOU I DON'T GET THIS IN HERE, BUT I'LL TRY IT.
06 05 00 49 CDR I THINK YOU WILL.
06 05 00 55 LMP I DON'T KNOW. OK, THAT'S PUSHED IN.
06 05 00 59 CDR LET ME DO THAT, AND YOU DO THE PENETROMETER BECAUSE
I KNOW HOW TO DO THAT ONE.
06 05 01 02 LMP OK. THAT'S A GOOD SWAP.

06 05 02 .9 LMP OK. IT GETS HARD DOWN THERE, DOESN'T IT, JOHN?
06 05 02 54 CDR YEAH, I DON'T THINK IT'S GOING TO GO. HOW MANY
HITS DO YOU WANT ME TO GIVE IT, HOUSTON, BEFORE I
QUIT?
06 05 03 15 LMP NOW, YOU'RE GETTING IT A LITTLE BIT, JOHN. IT'S
GOING IN, JOHN, ABOUT A QUARTER INCH A STROKE.
06 05 04 32 LMP IT'S IN, JOHN, IT'S IN. THAT'S FAR -
06 05 04 36 CDR HOW FAR DO YOU WANT TO DRIVE IT, CHARLIE?
06 05 04 38 LMP THAT'S FAR ENOUGH.

06 05 04 42 CDR GEE, IT CAME RIGHT BACK OUT, TOO.

06 05 10 11 CDR OK, THE UPPER ONE WAS 45, THE BOTTOM ONE WAS (5)4.

BAG 381
60115*

ANGULAR ROCK

114-18445 XSB
114-18446 XSB
114-18447 XSA
114-18448 LOC

06 05 11 36 CC HEY, JOHN. WHILE YOU'RE SAMPLING - -
06 05 11 38 CC - - THERE. " MIGHT LOOK AROUND AND SEE IF YOU
SEE ANY OF " VESICULAR BASALT.
06 05 11 46 CDR THAT'S WHAT " M A LOOKING FOR.

06 05 16 04 CDR BUT, CHARLIE. I JUST DON'T SEE ANY VESICULAR
BASALT.

06 05 18 46 CDR OK, HOUSTON. I COLLECTED ONE SAMPLE, WHICH
WAS A SHARP ANGULAR.

06 05 19 18 CDR THAT SAMPLE IS GOING IN BAG SAMPLE 38'

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 3 - STATION: 11					
06 22 42 28	LMP				WE'RE DEFINITELY ON THE EJECTA BLANKET HERE. AND, OH, WITHIN 100 METERS OR SO I THINK IS THE RIM. (OF NORTH RAY CRATER) THE ROCKS ARE JUST WHITE, CRYSTALLINE WHITE LOOKING.
06 22 43 10	LMP				GO ON OUT TO THE RIM. OK THAT'S A BRECCIA.
06 22 43 20	CDR				THAT WHITE ONE IS A BRECCIA. THERE'S THE RIM.
06 22 43 33	LMP				I CAN'T BELIEVE THE SIZE OF THAT BIG BLACK ROCK OVER HERE. AND I DON'T THINK THAT'S A BRECCIA JOHN. BUT ALTHOUGH IT MIGHT BE I SEE SOME LARGE WHITE CLASTS.
06 22 49 34	CDR				THE UNFORTUNATE THING ABOUT IT, HOUSTON, IS THAT RASCALLY RIM - IT GOES DOWN - IT SLOPES IN TO IT ABOUT 10 OR 15 DEGREES, WHICH IS THE KIND OF SLOPE I'M STANDING ON RIGHT NOW AND THEN ALL OF A SUDDEN IN ORDER TO SEE THE BOTTOM, I'VE GOT TO WALK ANOTHER 100 YARDS DOWN A 25 TO 30 DEGREE SLOPE AND I DON'T THINK I'D BETTER. MAYBE WE CAN DRIVE AROUND TO THE OTHER SIDE AND SEE DOWN INTO IT.
06 22 50 37	CDR				THE BOULDER LAYERS ARE HORIZONTALLY ORIENTED AND OF COURSE, THEY ARE ALL COVERED WITH TALUS. OVER ON THE NORTH WALL IN PARTICULAR, ABOUT ONE-THIRD OF THE WAY FROM THE TOP, IS A LINE OF BOULDERS WHICH YOU'D PROBABLY OUGHT TO BE ABLE TO SEE ON THE TV, BUT THEY'RE ALL ORIENTED RIGHT IN THAT LINE WHICH WOULD LEAN WITH THE THINKING THERE IS BEDDING THERE. DON'T YOU SEE THAT LINE RIGHT OVER THERE, CHARLIE?
06 22 51 30	CDR				IN THIS LIGHT THEY APPEAR TO BE DARK BOULDERS.
06 22 51 36	CC				THE WHITE ROCKS YOU SEE THERE. DO THEY LOOK LIKE THE CONE CRATER TYPE WHITE ROCKS?
06 22 51 48	LMP				NO, NOT TO ME.
06 22 51 55	CDR				BETTER LET ME GET A PIECE OF ONE, CHARLIE. THIS IS DEFINITELY A BRECCIA RIGHT HERE, A BIG FOOT AND A HALF BRECCIA. IT'S A WHITE MATRIX WITH DARK CLASTS AND IT LOOKS TO BE A THREE-ROCK BRECCIA; SOME OF THE DARK CLASTS HAVE EVEN DARKER CLASTS THAN THOSE.
06 23 02 02	LMP				RIGHT UNDER THE UPPER DULL GRAY SOIL THERE'S A LAYER OF WHITISH MATERIAL, MUCH LIKE IT WAS AT SOUTH RAY.

BAG 382
 67035 245.2 ROCK, BRECCIA
 67031 52.73 ROCK
 67032 13.3 FINES
 67033 14.88 FRAGMENT
 67034 14.55 FRAGMENT

NO PHOTOGRAPHY 06 22 52 30 CDR

OK, HOUSTON, I JUST PICKED UP A GRAB SAMPLE OF BRECCIA. IT'S VERY FRIABLE. IT LOOKS SHOCKED. IT HAS BLACK GLASS IN IT - - GLASS A COUPLE OF MILLIMETERS ACROSS, AND IT'S SO WORN DOWN THAT YOU KNOW WHAT IT REALLY LOOKS LIKE? IT LOOKS LIKE A - - IF I CAN USE THE ANALOGY. I'M NOT SURE WHAT THE HECK IT IS. IT LOOKS LIKE A TUFF - - I'M JUST LOOKS LIKE A ROCK. - - THE CLASTS ARE STICKING OUT OF IT.

06 22 53 41 CC AND JOHN, IN YOUR MINERAL DESCRIPTION, COULD YOU SEE - - CRYSTAL SHAPE TO IT?
 06 22 53 44 CDR COULD I SEE A CRYSTAL SHAPE? NOW THE CLASTS IN THERE ARE VERY ANGULAR. MAYBE THAT'S A ZAP CRATER - - THE WHITE MATRIX DOESN'T HAVE ANY CRYSTALLINE STRUCTURE THAT I CAN RECOGNIZE.

06 22 56 10 CC JOHN DID YOU GET BAG NUMBER ON THAT?
 06 22 56 16 CDR YEAH. EXCUSE ME 373 I THINK. (382)
 06 22 56 21 CDR IT'S IN THE BOTTOM OF SCB 7. ANYWAY I CAN IDENTIFY THAT ROCK FOR YOU.

BAG 383
 67055 221.4 ROCK
 67050 17.66 RESIDUE

116-18615 DSB
 116-18616 XSB
 116-18617 XSB
 116-18618 XSA

06 23 02 56 CDR OK, HOUSTON I'M GOING TO PICK UP A SAMPLE WHICH I THINK IS THE TYPE ROCK, BUT IT IS SORT OF DUST COVERED.
 06 23 03 33 CDR NO, I WAS WRONG, IT WAS A VERY FRIABLE, MUST BE SHOCKED WHITE ROCK WITH A LOT OF BLACK CLASTS - LOOKS LIKE ABOUT 50 PERCENT OF THE ROCK IS BLACK CLASTS(?), WHICH WAS A LOT MORE THAN THE LAST ROCK I PICKED UP AND IT SURE IS FRIABLE. YOU KNOW WHAT I MEAN, IT'LL TAKE A HECK OF A BEATING AND THAT'S GOING INTO BAG NUMBER 383.

FSR 7
 67015 1194.4 ROCK

116-18619 DSB
 116-18620 DSB
 116-18621 XSB
 116-18622 XSB
 116-18623 XSA

06 23 07 54 LMP LOOK AT THIS ROCK RIGHT HERE, JOHN. PURE WHITE.
 06 23 08 00 LMP YEAH, IT'S REALLY SHOCKED WHATEVER IT IS. IT LOOKS LIKE CHALK, TONY, IT'S SO SHOCKED. IT'S ABOUT PEBBLE SIZE AND IT'S BROKEN OPEN, LET'S MAKE IT 5 CENTIMETERS LONG, BROKEN OPEN. LET ME GET THIS ONE DOCUMENTED. OK, THE POLARIZING FILTERS COMING OFF, I HOPE.
 06 23 09 11 CDR THE BLACK CLASTS IN THIS ROCK ARE REALLY, REALLY BLACK MATERIAL. IT'S EITHER A VERY FINE GRAINED BLACK BRECCIA; I'LL TELL YOU WHAT IT LOOKS LIKE, IT LOOKS LIKE THAT BLACK BRECCIA, FINE GRAINED LINED(?) THAT HAD THAT WHITE CLASTS IN IT ON APOLLO 15. ALTHOUGH HERE, THE MATRIX IS WHITE AND THE CLASTS ARE BLACK.
 06 23 9 54 CC HOW LARGE ARE THE CLASTS?
 06 23 09 57 CC IS THIS BLACK BRECCIA FROTHY TOO?
 06 23 10 03 CDR 3 CENTIMETERS. NO, IT'S NOT FROTHY AT ALL. IT'S DENSE.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	ALT	CDR	CREW COMMENTS
EVA 3 - STATION: 11						
BAG 385 67095	339.8	ROCK	116-18624 DSB 116-18625 DSB 116-18626 XSB 116-18627 XSB 116-18628 XSA	06 23 10	10	IT COULD BE A VERY DENSE BASALT-LIKE ROCK. IT LOOKS LIKE IT HAS THE 90 DEGREE CLEAVAGE AND I'M HARD PUT TO TELL THAT. THAT'S JUST THE WAY IT BREAKS. BUT IT'S SURE SHOCKED. IT'S TOO BIG TO GO IN THE BAG BUT I'M GOING TO PUT IT IN THERE ANYWAY. AT LEAST IT HAS A SHOCKED APPEARANCE.
BAG 386 67075	219.2	WHITE BRECCIA	106-17318 XSB 106-17319 XSB	06 23 11	20	OK, HERE'S A SMALL SECONDARY UP HERE ON TOP OF THE RIM. IT'S ABOUT A METER ACROSS, ABOUT A METER DEEP AND IT HAS EITHER VERY ANGULAR BLACK CLASTS OR PART OF THIS BLACK ROCK IN TOTAL, AND THEY MUST BE 4 OR 5 CENTIMETERS ACROSS IN THERE AND I'LL GET ONE OR TWO OF THOSE BABIES. THE OUTER SURFACE OF THAT ROCK IS DUST COVERED IT APPEARS TO BE A REALLY BLACK GLASS. IT'S GOING INTO 385.
BAG 386 67115	240.0	ROCK, BRECCIA	SAFE AS BAG 385 116-18624 DSB 116-18625 DSB 116-18626 XSB 116-18627 XSB 116-18628 XSA	06 23 15	44	YEAH, THIS NEXT ONE THAT'S GOING IN, IS SO DUST COVERED AFTER I PICKED IT UP AND DROPPED IT INTO THE DIRT. I CAN'T DESCRIBE IT TO YOU. OTHER THAN TO SAY IT'S DUST COVERED. ...S GOING INTO BAG 386.
BAG 415 67435	353.5	GLASS COATED ROCK	106-17320 XSB 106-17321 XSB 106-17322 XSA	06 23 18	23	OKAY - HERE'S AN OLD GLASSY ROCK, TONY, THAT'S GLASS COATED. ANYWAY, IT WENT INTO 415. AND IT WAS HACKLY LOOKING ON THE SURFACE - THAT'S WHY I STOPPED TO GET IT.

BAG 416
67455* 942.2 ROCK, FRIABLE
106-17331 XSB 06 23 16 31 LMP I WAS JUST GOING UP HERE A LITTLE
106-17332 XSB BIT, JOHN, AND DO SOME OF THE FLIGHT LINE
STEREO OF THIS 3 METER BLOCK UP HERE.

06 23 19 26 LMP I'M GOING TO GIVE YOU A LITTLE STEREO ON THIS
BOULDER

06 23 21 12 LMP THERE'S ONE OF THESE WHITE ROCKS UP HERE, JOHN,
THAT'S GOT A FRACTURE ON IT.

06 23 21 19 CDR GOT A HAMMER?

06 23 21 20 LMP YEAH, I GOT THE HAMMER. IT'S JUST LOOSE, THE
STUFF IS LYING UP THERE ON THE TOP.

06 23 21 57 CC CHARLIE, IF POSSIBLE, WE'D LIKE SOME SAMPLES ON
THAT STUFF ON TOP OF THE BOULDER.

06 23 24 58 CDR DID YOU GET THE BOULDER OFF THE TOP?

06 23 25 01 LMP YES, I DID. I GOT THAT SAMPLE.

06 23 25 09 CDR IT'S A MULTI-ROCK BRECCIA.

JMP THE MATRIX IS THE WHITE - - WITH THE BLACK BEING
THE CLASTS.

06 23 25 15 CDR YEAH, I SEE AT LEAST 2 DIFFERENT COLORS OF
LIGHT-DARK CLASTS. THEY MUST BE AT LEAST A 3
ROCKER.

BAG 417
67460* FILLET SOIL

116-18632 LSA 06 23 20 35 CC CHARLIE, WHILE YOU'RE UP AT THAT BOULDER, IF YOU
116-18633 DSA CAN GET SOME OF THAT FILLET AS WELL AS THE
105-17333 XSB BOULDER?

106-17334 XSB 06 23 21 30 LMP HEY, TONY, WE'LL FILLET SAMPLE FOR YOU UP HERE.

106-17335 XSA 06 23 23 37 LMP JOHN, COULD WE GET A FILLET UP THERE WHERE THAT
106-17336 LOC GROUND IS?

06 23 24 19 LMP I'LL GET THE CROSS-SUN.

06 23 24 40 CDR THAT FILLET IS 417.

06 23 24 45 LMP OK, I'LL GET THE DOWN-SUN HERE.
THERE'S AN AFTER AND I'LL TRY TO GET A LOCATOR
FROM UP HERE.

BAG 418
67475* 175.1 BLACK CLAST
CHIPPED FROM
BRECCIA BOULDER

106-17337 XSA 06 23 26 00 LMP HEY, JOHN, I'M CHIPPING OUT THIS LITTLE TINY,
THIS BIG BLACK CLAST HERE. IT'S COMING RIGHT
OUT. I DON'T THINK WE GOT ANY OF IT IN THAT
SAMPLE THAT I GOT. AND THIS THING IS SO FRIABLE.
HEY, I GOT IT.

06 23 26 35 LMP THIS BLACK CLAST I CHIPPED OUT IS AN APHANITIC
MATRIX, IT LOOKS LIKE A TYPICAL BASALT TO ME.
I GOT A PICTURE OF IT AFTER I CHIPPED IT OUT. I
DIDN'T THINK I WAS GOING TO BE ABLE TO, BUT IT
CAME OUT, GET A 5 FOOTER. IT'S GOING IN 418.
I HAVEN'T SEEN A ROCK LIKE THAT BEFORE IN THE
APOLLO SAMPLES.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 3 - STATION: 11					
BAG 387 67415*		WHITE ROCK	116-18636 DS 116-18634 XSB 116-18635 XSB	06 23 27 38 06 23 27 57	CDR I HAVE A ROCK HERE THAT IS A FINE WHITE CRYSTALLINE ROCK. IT'S PRETTY WELL DUST COVERED, BUT I DON'T SEE ANY CLASTS IN IT. OF COURSE IT COULD BE JUST A HUNK OF MATRIX THAT GOT BUSTED LOOSE. BUT AS FINE AS THESE CLASTS ARE IN IT, -- THAT'S GOING INTO BAG 387 AS FINE AS THESE ROCKS ARE, I DON'T SEE HOW YOU CAN MISS ONE.

BAG 419 67480*		SOIL		06 23 28 48 06 23 28 51	CDR LET'S GET A SOIL SAMPLE RIGHT HERE. LMP OK.
				06 23 29 24	LMP THE REGOLITH HERE, TONY UP ON THIS CRATER RIM IS REALLY SOFT. WE'RE SINKING IN ON THE SLOPES ABOUT 6 INCHES OR SO.
				06 23 29 46	LMP THE SOIL SAMPLE HERE IS 419.

BAG 420 67510*	468.4	RAKE FRAGMENTS	116-18637 XSB 116-18638 XSB 116-18639 XSB 116-18640 XSA	06 23 30 07 06 23 30 11 06 23 30 18 06 23 30 21	LMP LET'S GET IN A CLEAR SPOT, JOHN, TO RAKE. OK? THEN WE CAN DO IT DOWN THERE TOO. LMP IT LOOKS ALMOST FRUITLESS UP HERE. LMP OH NO, THERE'S SOME ROCK. CDR LOT OF ROCKS THERE, CHARLIE, ONE RAKE SAMPLE. LMP ONE RAKE SAMPLE RIGHT OUT HERE, TONY.
				06 23 30 29	LMP IT'S GOING IN 420.
				06 23 30 39	LMP OH, HE'S GOT SOME NICE ONES THERE.
				06 23 30 51	LMP THEY'RE SO DUST COVERED I CAN'T REALLY SEE WHAT THEY ARE.

BAG 421
67610*

RAKE FRAGMENTS

106-17338 DSB
116-18641 XSB
116-18642 XSB
116-18643 XSA

06 23 31 35 LMP WHY DON'T WE GO DOWN HALF WAY, JOHN, AND DO ANOTHER RAKE SAMPLE AND THEN GO DOWN TO THE BIG BLACK ROCK.
06 23 31 43 CDR ALRIGHT.
06 23 31 46 LMP THAT'LL BE ABOUT 150 METERS RADIAL - NOT RADIAL, BUT CONCENTRIC SAMPLING.

06 23 33 35 CDR COME RIGHT DOWN THIS WAY.
06 23 33 40 LMP OK, JOHN'S GETTING ABOUT 2 RAKES, HE'S DOING 2 RAKES AND HE'S GOT ABOUT 15 PEBBLES.
06 23 33 52 CDR THERE'S NOT ANY THERE.
06 23 33 54 LMP THAT'S A PRETTY GOOD FULL SAMPLE. THERE YOU GO, LOOK AT THAT. THAT'S A BAG FULL NOW. THE THIRD ONE WAS REALLY FRUITFUL.
06 23 34 09 CDR OK, TURN IT. THERE YOU GO. I COULD SEE VESICLES IN ONE OF THEM.
06 23 34 17 LMP YES, I COULD TOO. THAT'S IN 421.

BAG 422
67600*

RAKE SOIL

SAME AS
BAG 421

06 23 34 41 LMP GIVE THEM A SOIL.
06 23 35 09 LMP 422 FOR THE SOIL SAMPLE.
06 23 35 13 LMP THAT'S ENOUGH, JOHN. THAT'S A HUNDRED GRAMS.

BAG 423
57710*

694.1

RAKE FRAGMENTS
UNSORTED

106-17339 DSB
116-18644 XSB
116-18645 XSB
116-18646 XSA
106-17340 LOC

06 23 35 46 CDR OK, CHARLIE, LET'S GO BACK TO THE ROVER. PUT YOUR BAG ON THERE AND HEAD OUT FOR THE BIG ROCK, BECAUSE YOU GOT A BAG ON YOUR BACK, AND WE'LL USE IT.
06 23 36 53 LMP WE'LL STOP ABOUT HALF WAY DOWN HERE AND DO ANOTHER RAKE, HOW'S THAT?
06 23 36 57 CDR GOOD IDEA, CHARLIE.

06 23 38 22 LMP HE'S GETTING A COUPLE OF WHITISH FRAGS AND THEN DUST-COVERED GRAY-LOOKING FRAGS. I THINK YOU GOT A BAG FULL THERE, JOHN.
06 23 38 34 CDR YEP, THREE SCOOPS AND A BAG FULL. IT'S ALL SALTED WITH THAT ONE WHITE ROCK HERE.
06 23 38 53 LMP THAT'S IN 423.
06 23 38 59 CDR HANG ONTO THIS. THAT'S GOING IN CHARLIE'S SCB.
06 23 39 09 LMP GET AN AFTER OF THAT, JOHN, I'LL GET THE SOIL SAMPLE.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 3 - STATION: 11					
BAG 388		RAKE SOIL	SAME AS	06 23 39 09	LMP GET AN AFTER OF THAT, JOHN, I'LL GET THE SOIL
67700	142.6	RESERVE FINES	BAG #23		SAMPLE.
67701	235.0	< 1 MM	116-18646 XSB	06 23 39 14	CDR THERE'S THE AFTER.
67702	21.69	1-2 MM		06 23 39 15	LMP IT'S HARD UNDER THERE, YOU KNOW IT.
67703	13.71	2-4 MM		06 23 39 22	CDR YES, THAT'S WHY THE RAKE WOULDNT GO DOWN.
67704	7.47	4-10 MM		06 23 39 27	CDR I'M NOT GOING ANYWHERE. HIT IT AGAIN.
67705	6.57	CLOD		06 23 39 32	LMP TONY, THERE MUST BE A BIG ROCK RIGHT UNDER HERE.
67706	2.08	CLOD		06 23 39 37	LMP I CAN'T GET THE RAKE IN.
67707	1.84	CLOD		06 23 39 40	CDR LOOK AT THAT, CHARLIE.
67708	1.43	CLOD		06 23 39 41	LMP I KNOW, IT'S ALL WHITE UNDER HERE.
				06 23 39 47	LMP DOWN ABOUT A CENTIMETER OR LESS, IT'S ALL WHITE.
				06 23 39 59	LMP I THINK IT MIGHT BE A ROCK SURFACE, AND ITS, ONE OF THOSE FRIABLE ONES, THE FRACTURED ONES, AND WE'RE JUST CHIPPING OFF - HERE, JOHN, I CAN GET A SOIL SAMPLE FROM WHERE YOU KICKED IT UP WITH YOUR FOOT.
				06 23 40 23	LMP OKAY, YOU WANT ANOTHER ONE?
				06 23 40 34	LMP THAT SOIL SAMPLE IS GOING IN BAG 388

				06 23 41 21	CDR IN THE SUNLIGHT, HOUSTON, THIS WHITE ROCK HAS SORT OF A GREENISH HUE TO IT, THIS ROCK ERECCIA. WHICH IS WHAT ALL THIS IS WE'RE WALKING ON RIGHT NOW IS THIS WHITE ROCK BRECCIA THAT CHARLIE CHIPPED OUT OF AND I GUESS THAT IS PROBABLY THE SECOND LAYER UP. I WOULD RECKON -- IF WE COULD SEE TO THE BOTTOM, WE COULD SAY FOR SURE IF THIS BIG BLACK ROCK IS RIGHT OUT OF THE BOTTOM. BUT MY GUESS FROM THE OLD PHOTOGRAPH IT PROBABLY IS.

BAG 389		ROCK CHIPS FROM	116-18653 DSA	06 23 42 03	LMP LOOK AT THE SIZE OF THAT ROCK.
67935	108.9	HOUSE ROCK	106-17345 XSB		
67936	61.82	BOULDER	116-18647 XSD	06 23 42 43	CDR AND LOOK AT THOSE -- LOOK AT THE SHAPE OF THAT RASCAL.
67937	59.67		116-18648 XSD	06 23 42 50	LMP YES. WE DON'T SEE ANY GLASS, THOUGH, PARTICULARLY.
			116-18649 XSD	06 23 42 57	CDR NO, I GUESS I'D HAVE TO CALL THIS A BLACK MATRIX -- LOOKS LIKE THE MATRIX HAS REVERSED ITSELF NOW, IT'S ALL BLACK MATRIX.
				06 23 43 11	LMP WELL, TONY, THAT'S YOUR HOUSE ROCK RIGHT THERE.

06 23 43 52 LMP LOOK AT THAT. SEE IT'S GLASS COATED AND THIS IS JUST FRACTURED OFF. WE COULD PULL THAT OFF. BIG CHUNKS OF THAT WILL COME RIGHT OFF. IT'S GOT A BLUISH TINT TO IT, DOESN'T IT? IT DOES.
 06 23 44 15 LMP IT DOESN'T LOOK LIKE REAL BASALT.
 06 23 44 19 CDR LOOK AT THAT SHATTER CONE RIGHT THERE, CHARLIE. I'LL BE DAMNED.
 06 23 44 20 LMP IT IS. I'M SURE.
 06 23 44 24 CDR PUT YOUR TONGS UP THERE AND I'LL GET A CLOSEUP.
 06 23 44 29 CDR
 06 23 44 33 LMP
 06 23 44 45 LMP OK, HERE'S THE CHUNK OF IT. THE BLACK ROCK LOOKS - - SOME OF IT'S GLASS-COATED, TONY, AND MAN, THAT IS A SHATTER CONE.
 06 23 45 00 CDR CHARLIE, LET'S GET A PIECE OF IT.
 06 23 45 01 LMP OK, HERE YOU GO. I GOT A PIECE. GIVE ME A BAG. ON THE NEXT ONE HOW ABOUT STEPPING BACK AND AS I POINT TO IT, I'LL PULL OFF ANOTHER PIECE AND WE'LL PUT A COUPLE OF PIECES IN HERE.
 06 23 45 18 CDR OK.
 06 23 45 20 LMP THAT'S GOING IN BAG 389.
 06 23 45 27 LMP OK, LET'S JUST TAKE A PICTURE OF THAT. SO YOU'LL KNOW WHERE IT CAME FROM.
 06 23 45 31 LMP IT'S BADLY SHATTERED, TONY, SO I DON'T KNOW WHETHER IT'S GOING TO STAY TOGETHER OR NOT. GET IT, CHARLIE, I'LL GET THE PICTURE.
 06 23 45 38 CDR THAT'S RIGHT NEAR THE SHATTER CONE.
 06 23 46 11 LMP OK 5 SAMPLES IN 389 TONY.

 FSR 8 ROCK CHIPS FROM 116-18653 DSA THAT'S BLACK. THERE'S FAINT - - LOOK AT THAT
 67915 BOULDER 116-18652 XSA VEINLET RUNNING THROUGH - -
 HOUSE ROCK 06 23 46 15 LMP RIGHT THERE, JOHN. - - A BRECCIA. MAN, IT'S A
 06 23 46 22 LMP BIG ROCK. HERE'S THIS WHITE STUFF, HERE'S A ROCK
 JOHN, THAT IS NOT A BRECCIA. A CLAST IN A BLACK
 ROCK.
 06 23 46 48 CDR PUT IT BACK WHERE YOU GOT IT FOR A SECOND AND LET
 ME GET A PICTURE OF IT. NOW, LET'S FIT IT IN.
 NO, JUST MOVE AWAY. THEY CAN FIT IT IN. OK, THAT'S
 HOW IT WAS MORE OR LESS?
 06 23 47 02 LMP YEAH, MORE OR LESS.
 06 23 47 03 CDR OK, NOW GET IT.
 06 23 47 06 LMP LET'S GET AN AFTER.
 06 23 47 10 CDR YEAH, THAT HAS A CLAST OF THAT ROCK IN IN IT TOO.
 06 23 47 24 LMP THAT'S UNBAGGED, AND IT'S GRAPEFRUIT SIZE, AND IT
 WAS A WHITE MATRIX. IT'S NOT AS NEARLY SHOCKED,
 AND IT'S A LARGE CLAST ABOUT A 3 METER CLAST OUT OF
 THIS BIG BLACK ROCK. PART OF IT.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREK COMMENTS
EVA 3 - STATION: 11					
BAG 425		ROCK CHIPS FROM	116-18653 DSA	06 23 47 58	LMP
67955	162.6	BOULDER			OK, JOHN, I'M GOING TO WHACK OFF ANOTHER - COULD YOU GET A PICTURE OF THIS, WITH THE HAMMER IN. LET ME GET SOME OF THE UNSHOCKED WHITE STUFF.
67956	3.7	HOUSE ROCK			HARD ISN'T IT.
67957	1.73				YEAH, IT'S HARD, BUT I'M GOING TO GET A PIECE. I GOT IT, CHARLIE.
					OK, HERE'S A GOOD PIECE RIGHT UP HERE.
					OK, I'VE GOT IT. OF THE WHITE CLAST WITH IT'S NOT NEARLY AS SHOCKED, IS GOING IN 425.

BAG 390		SOIL, E-W SPLIT	116-18653 DSB	06 23 49 07	CC
67940	26.8	RESERVE FINES			DID YOU ALL SEE A PERMANENTLY SHADOWED SAMPLE AROUND THERE?
67941	105.9	< 1 MM		06 23 49 13	CDR NO, WE DON'T.
67942	12.23	1-2 MM			THE HOLE UNFORTUNATELY IS A SORT OF AN...EAST-WEST SPLIT THERE. CHARLIE.
67943	9.36	2-4 MM		06-23-49-29	CDR I KNOW, IT IS AN EAST-WEST SPLIT. TONY, WE GOT AN EAST-WEST SPLIT HERE, P. WE CAN GET THE RAKE IN. WHY DON'T YOU GO AHEAD AN. KE A SOIL OUT OF THAT.
67944	8.59	4-10 MM		06 23 49 36	LMP
67945	4.37	FRAGMENT			YEAH, I CAN GET IN HERE. RIGHT UP NEXT TO THIS ROCK RIGHT HERE WOULD BE A GOOD POINT. I GOT IT. IN THE BAG, - - OK. WAIT A MINUTE, I'LL GIVE YOU A LITTLE BIT MORE. IT'S NOT A CLASSIC EAST-WEST SPLIT HOUSTON, BUT IT'S ONE.
67946	3.2	FRAGMENT		06 23 50 46	CDR
67947	2.43	FRAGMENT			SPLIT HOUSTON, BUT IT'S ONE.
67948	1.59	FRAGMENT		06 23 50 51	CDR BAG 390.
				06 23 50 52	CC OK, BAG 390. AND WE'LL NEED A REFERENCE SOIL.

BAG 391		REFERENCE SOIL	106-17347 XSB	06 23 51 34	CDR
67960	12.11		106-17348 XSB		WE'RE GOING TO DO A REFERENCE SAMPLE. LET'S GET THAT HUGH MASS RIGHT THERE.
				06 23 51 36	LMP OK.
				06 23 51 39	CDR THE TONGS ARE NOT GOING TO GO IN THIS GROUND, CHARLIE.
				06 23 51 41	LMP I KNOW IT. IT'S A BIG ROCK DOWN THERE. WHY DON'T YOU JUST HOLD IT THERE, AND I'LL TAKE THE PICTURE.
					GOT IT, YOU GOT IT.
				06 23 52 00	CDR OK, TONY, THIS SOIL HERE IS VERY HARD, AND THE RAKE REALLY WON'T GO INTO IT. IT'S BENDING TINES LIKE WE USE TO IN TRAINING.
				06 23 52 10	LMP
				06 23 52 34	CDR THERE'S NOTHING LOOSE.
				06 23 52 35	LMP OK, THERE'S ABOUT 25 GRAMS.

BAG 392
67975

446.6 "FROTHY" ROCK

06 23 53 07 LMP THERE'S A REAL FROTHY ROCK RIGHT THERE, JOHN.
WANT TO THROW THAT IN?
GOT A GRAB SAMPLE GOING IN 393 (392), WHITE MATRIX
WITH GLASS ON IT.

PADDED
BAG NO. 2
67235*

ROCK

116-18656 DSB 06 23 57 11 CC IF YOU SEE A FIST SIZE IGNEOUS ROCK NEAR THE
116-18654 XSB ROVER WE'LL USE THE PADDED BAGS HERE, IF NOT
116-18655 XSB WE'LL JUST FORGET THEM,
116-18657 LOC OKAY.
I BET YOU ALL OF THIS STUFF UP HERE IS REALLY
SHOCKED. DOES THAT MAKE ANY DIFFERENCE TO YOU?
AND THEREFORE IT'S NOT GOING TO BE TOO HARD.
ALL RIGHT, IF YOU FIND A GOOD DENSE ONE THAT
YOU THINK HAS A GOOD HARD SURFACE ON IT WE'LL
GO AHEAD AND TAKE IT.
I'M GOING TO GET ONE RIGHT HERE.
IT'D BE TOO BIG FOR A PADDED BAG.
NO, IT'LL GO IN.
WELL, LET'S GIVE IT A GO.
WHY DON'T YOU PUT IT IN NUMBER 6 THERE JOHN.
NOW, LET'S SEE IF I CAN FIND ANOTHER ONE HERE.
OKAY, BUT GET A SMALLER ONE CHARLIE.

239

PADDED
BAG NO. 1
67215*

ROCK

106-17355 XSB 07 00 01 31 LMP I'LL TELL YOU THIS REGOLITH IS ABOUT AN INCH
106-17356 XSB DEEP HERE IN MOST PLACES. THERE'S JUST LOTS
OF ROCKS UNDER THIS STUFF.
OKAY WE GOT TWO ROCKS FOR YOUR PADDED BAGS BUT
I'M NOT SURE THEY ARE GOING TO DO YOU ANY GOOD
THEY ARE SO DUST COVERED.
I HIT ONE WITH THE SHOVEL HERE THAT I'VE GOT IN
MY HAND THAT YOU JUST SAW ME PICK UP AND IT
DIDN'T BREAK ANYWAY SO AT LEAST IT'S THAT HARD.
THAT'S A BETTER SIZED ONE.
OKAY, CHARLIE, HERE'S BAG 6. BOTH PADDED BAGS ARE
IN THERE.
OKAY, JOHN.
THE VELCRO CAME OFF BOTH THOSE BAGS AND WE WEREN'T
ABLE TO PUT EM TIGHT LIKE THEY'RE SUPPOSED TO BE.
OKAY. THEY'RE RIGHT ON THE TOP IN NUMBER
6 AND THERE'S NO ROCKS ON TOP OF THEM.

FSR 8B

ROCK

116-18658 USB 07 00 07 53 LMP GOOD GRAB SAMPLE.
116-18659 USB 07 00 07 55 CDR I THOUGHT YOU'D LIKE THAT ONE.
116-18660 LOC

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS

TRAVERSE - STATION 11 - 13					
				07 00 10 22	CDR
				07 00 10 30	LMP
					OKAY, STATION 13, RIGHT DOWN THE SAME WAY WE CAME. WE CAN'T SEE OLD ORION FROM HERE. THIS IS GOING TO BE SOMETHING GOING DOWN THIS HILL.
				07 00 10 53	LMP
					LOOK AT THAT SLOPE. THIS IS AT LEAST 15 DEGREES SLOPE WE'RE GOING DOWN AND THAT ROVER CAME RIGHT UP IT AND YOU NEVER EVEN KNEW IT.
				07 00 12 17	LMP
					GOING BACK ACROSS SUN THE TRACKS, WE JUST BARELY PENETRATED THE REGOLITH MAYBE 1/8 OF AN INCH OR SO. WHATEVER IT IS, IT'S GOING TO BE REAL FIRM HERE.
				07 00 15 53	CDR
					SEE THAT BIG ROCK OVER THERE? MAYBE THAT'S A PERMANENTLY SHADOWED ONE. TRY IT?
				07 00 16 23	LMP
					ON DOWN THIS RIDGE, WE'RE GOING DOWN ABOUT - AT AT LEAST A 5 DEGREE SLOPE. WE HAVE ONE REAL FILLETED ROCK THAT WE'RE JUST PASSING NOW AT 3.8 AT 183 AND THEN WE HAVE ANOTHER ROCK DOWN HERE THAT'S THE SAME SIZE THAT'S ABOUT 3 METERS ACROSS THAT HAS HARDLY ANY FILLET. AND THAT'S THE ONE WE'RE GOING TO STOP BY. IS THAT WHAT YOU MEANT JOHN FOR PERMANENTLY SHADOWED? YEAH.
				07 00 16 49	LMP
				07 00 16 51	CDR
				07 00 17 23	LMP
					OKAY, BE ABLE TO SEE THAT BIGGY. THAT ROCK LOOKS LIKE THAT GREAT BIG ONE WE SAMPLED UP ON THE RIM, JOHN.
				07 00 17 31	CDR
					SURE DOES.
				07 00 19 07	CC
					OKAY, THE PLAN HERE IS A RAKE SOIL FIRST TOGETHER AND AFTER YOU'VE DONE THAT WE'D LIKE JOHN TO TAKE AN LMP AND CHARLIE YOU CAN GO SAMPLE.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 3 - STATION: 13					
BAG 426 63320*	351.0	SHADOWED SOIL UNSORTED	106-17413 XS 106-17414 XS 106-17415 XS AS A PAN OF BOULDER	07 00 27 49 CC 07 00 28 00 CC 07 00 28 11 LMP 07 00 30 12 LMP	WHILE JOHN'S DOING THE LPM WE'D LIKE YOU TO HAMMER ON THAT ROCK A BIT. AND IF YOU GET A CHANCE AND IT LOOKS LIKE SOME SOIL RIGHT ON THE SOUTH SIDE, KIND OF UNDERNEATH - MIGHT BE PERMANENTLY SHADOWED YOU MIGHT TAKE SOME OF THOSE AND JUST PUT IT IN THE BAG. ALL RIGHTY. OKAY, I'M GOING TO GET ON THE SUNLIT SIDE SO I'LL KNOW WHAT I'M WHACKING ON HERE. THAT MIGHT BE A PERMANENTLY SHADOWED SOIL RIGHT IN THERE. I THINK IT IS, AS A MATTER OF FACT. IT'LL PASS. YES SIR, BABY, THAT IS A PERFECT SHADOWED SOIL SAMPLE. IT IS REALLY PERFECT! JOHN, YOU COULDN'T HAVE PICKED A BETTER ROCK! I DON'T KNOW HOW LONG THAT ROCK'S BEEN THERE, BUT THAT DIRT HAS BEEN SHADOWED EVER SINCE IT'S BEEN HERE. I GOT IT FROM ABOUT A METER UP UNDER THERE, TONY. AND I'M SORRY, BUT IT'S GOING TO HAVE TO GO IN A LITTLE OL' PLASTIC BAG HERE. AND IT'S NUMBER 426
BAG 427 63340*	180.0	SOIL (CONTROL) UNSORTED	SAME AS BAG 426	07 00 32 21 CC 07 00 32 30 LMP 07 00 32 33 CC 07 00 32 40 LHP 07 00 33 46 CDR 07 00 34 21 CDR 07 00 34 46 LMP 07 00 35 50 CDR 07 00 35 00 CDR 07 00 35 07 LMP 07 00 35 20 CDR	ANY CHANCE GETTING SOIL UNDERNEATH THAT NOW FOR THE CONTROL? UNDERNEATH THE SHADOWED, YOU MEAN? UNDERNEATH WHERE YOU JUST TOUCHED, JUST DIG DEEPER. YEAH, LET ME TIP MY VISOR FOR YOU. THAT THING IS BRIGHT! GET OUT OF THE SUN. YEAH, I CAN GET THAT FOR YOU. THAT'S ABOUT 100 GRAMS, TONY, MAYBE 200. GET A PICTURE OF IT. CAN I HELP YOU CHARLIE? LET ME PUT THAT IN THE BAG. OKAY, THERE'S ABOUT 50 GRAMS IN THE CONTROL. IT'S GOING INTO THE BAG 427. BOY, IT JUST MIGHT BE PERMANENTLY SHADOWED HOUSTON, BECAUSE IT'S DOWNSLOPE. I REACHED BACK IN THERE ABOUT 2 TO 3 FEET IT LOOKED LIKE TO ME. THAT THERE IS ONE OF THOSE GOPHER HOLES.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENT
EVA 3 - STATION: 10' (PRIME)					
				07 00 46 41	CC STATION 10 MAKES A TRIANGLE WITH ALSEP AND THE OLD STATION 10. WE'LL CALL IT STATION 10 PRIME, AND IT'S ABOUT 50 METERS TO THE NORTHWEST OF THE OLD 10.
				07 01 12 15	CC OKAY. IF YOU CAN RECOGNIZE AN EDGE OF THE RAY, IN THE NEIGHBORHOOD OF 50 METERS, NORTH OF THE ALSEP AREA, THAT WOULD BE A GOOD PLACE TO FIX STATION 10 PRIME. OUR PHOTO SHOWS THE EDGE OF THE RAY IN THERE.
				07 01 12 36	CDR PICK THE EDGE OF A RAY, 50 METERS OR SO NORTH OF AN ALSEP SITE OF THE ALSEP. YOU CAN'T HARDLY TELL WHERE ONE - THEY'RE NOT DISTINCT - THE GRADATIONAL PATTERN IS JUST TOO GRADUAL.
				07 01 12 57	CC JUST PICK A PLACE 50 METERS, NORTH AND WE'LL CALL THAT 10 PRIME.
				07 01 14 50	CC OKAY, WE'RE LOOKING FOR IN THE SAMPLING HERE THOSE VESICULAR BASALTS THAT YOU BOTH DESCRIBED IN THE AREA.
				07 01 15 04	LMP THAT MIGHT BE ONE OVER THERE, JOHN, IT'S THE BLUISH---
				07 01 15 17	CC AND TO MAKE A TRIANGLE WITH THE OTHER DOUBLE CORE AND THE DEEP CORE.
				07 01 15 38	LMP WE'RE STOPPED AND WE'RE JUST ABOUT DIRECTLY NORTH OF THE ALSEP.
BAG 347 60610*	750.9	RAKE FRAGMENTS UNSORTED	117-18824 DSB 116-18681 XSB 116-18682 XSB 116-18683 XSA 116-18684 XSA 117-18825 LOC	07 01 20 44 07 01 22 24 07 01 22 43 07 01 23 14 07 01 23 19 07 01 23 20 07 01 23 30 07 01 23 33 07 01 24 10	CC CDR LMP LMP CDR CDR LMP CDR OK, TONY, OUT OF THAT SCOOP WE LOST THE TWO BIGGEST ROCKS. I POURED TOO FAST. OK, THAT'S IN BAG NUMBER 347.

BAG 348	182.6	RAKE SOIL	07 01 24 51	CDR	LET'S GET THE SOIL, CHARLIE.
60600	330.2	RESERVE FINES	07 01 25 14	LMP	YEP. OK, THERE'S A SCOOP.
60601	14.93	< 1 MM	07 01 25 21	CDR	OK, AND THAT'S GOING INTO BAG 348.
60602	8.57	1-2 MM			
60603	3.94	2-4 MM			
60604		4-10 MM			

07 01 24 25 CC RIGHT, WE'RE GOING TO WANT A RAKE SOIL, OVER IN THE AREA OF THE OLD STATION 10, ALSO. SO IT'S UP TO YOU WHETHER IT'S EASIEST TO GO GET IT NOW OR TO GET THE DOUBLE CORE NOW. AFTER, YOUR THROUGH WITH THIS ONE.

07 01 25 43 LMP AT OLD STATION 10.

FVA 3 - STATION: 10

BAG 349	76.1	RAKE FRAGMENTS	07 01 26 29	CDR	LOOK AT THESE NEAT LITTLE CRATERS, YOU JUST RUN RIGHT THROUGH THEM.
60510*		UNSORTED			THERE'S A LOT OF TRACKS AROUND THERE, CHARLIE. THAT MUST BE THE OLD STATION 10 RIGHT THERE. IT'S RIGHT OVER HERE, IT IS, YEAH.
			07 01 27 05	LMP	THIS IS THE OLD DOUBLE CORE SITE, WE'LL RAKE HERE.
			07 01 27 13	CC	THAT'S EXACTLY WHAT WE WANT.
			07 01 27 17	LMP	OK, WE'RE WITHIN THREE METERS OF IT.
			07 01 27 44	CDR	OK, YOU LOCATING IT, CHARLIE?
			07 01 27 53	LMP	YEAH. OK, WE'RE SACKING IT 349.
			07 01 28 20	LMP	JOHN'S GOT 2 SCOOPS--2 RAKES FULL. NOT NEARLY AS PRODUCTIVE OVER HERE.
			07 01 28 29	CC	OK, YOU'RE PROBABLY ON A DIFFERENT PART OF THE RAY THAT'S GOOD.
			07 01 28 39	LMP	2 SCOOPS AND WE GOT 3 LITTLE FRAGS. 1 OF THEM JUST DROPPED OUT.
			07 01 28 44	CDR	3 IS ALL WE GOT?
			07 01 28 46	LMP	2, 1 OF THEM DROPPED OUT.
			07 01 28 53	CDR	HERE'S A COUPLE MORE.
			07 01 29 16	CDR	OK, LET ME GET 1 MORE, CHARLIE.
			07 01 29 36	LMP	HE HAD ABOUT 20 POUNDS OF SOIL, TONY, AND HE CAME UP WITH 1 LITTLE FRAG.
					AND WE JUST DROPPED IT.
			07 01 29 45	LMP	THAT'S ENOUGH.
			07 01 29 47	CC	YEAH, LETS JUST CALL THAT OUR RAKE SAMPLE.
			07 01 29 48	LMP	OK, WE GOT ABOUT 4 FRAGS IN 349.

CROSS-REFERENCE OF LUNAR SAMPLES WITH LOCATIONS, PHOTOGRAPHS, APOLLO-ELAPSED TIMES,
AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 3 - STATION: 10					
BAG 350		RAKE SOIL	SAME AS	07 01 29 57 LMP	OKAY, WE NEED A SOIL SAMPLE, JOHN.
60500	233.7	RESERVE FINES	BAG 349	07 01 30 26 CDR	OK, LET ME GET 1 MORE SCOOP FULL.
60501	306.7	< 1 MM	116-18687 XSB	07 01 30 42 CDR	GET A LITTLE AFTER HERE.
60502	17.69	1-2 MM		07 01 31 13 CC	OK, WAS THAT BAG 350, WE DIDN'T GET A NUMBER.
60503	9.98	2-4 MM		07 01 31 22 LMP	YEAH, 350, TONY. IT WAS.
60504	6.63	4-10 MM			

FSR 10		ROCK CHIP BROKEN	116-18689 XSB	07 01 31 30 CDR	WHAT ARE YOU SUPPOSED TO BE DOING WHILE I DO
60018	1501.0	FROM BOULDER	116-18690 XSB	07 01 31 32 LMP	THE DOUBLE CORE?
			116-18691 XSA	07 01 31 34 CC	I'M SUPPOSED TO BE SAMPLING.
			116-18692 XSA	07 01 31 34 CC	RIGHT. BE LOOKING AROUND FOR EXOTIC --
			116-18693 LOC	07 01 31 39 CC	-- ESPECIALLY THINGS LIKE THAT VESICULAR BASALT YOU DESCRIBED.
				07 01 31 45 LMP	THAT'S WHY I'M WHACKING ON THIS ONE.
				07 01 31 50 LMP	THAT IS A HARD ROCK, RIGHT THERE, JOHN.
				07 01 32 13 LMP	I GOT IT WITH THE RAKE. WHY DON'T YOU TAKE THAT
					AND PUT IT IN MY SACK AND I'LL GO OVER AND GET
					THE DOUBLE CORE?
				07 01 32 23 CDR	CARRY THIS ONE OVER THERE AND THROW IT IN THE
				07 01 32 26 LMP	BIG BAG.
					OK, I'LL DO IT. OK, TONY, I JUST WHACKED OFF ONE
					THAT -- I THOUGHT WAS BASALTIC LOOKING BUT IT TURNS
					OUT IT'S GLASSY WITH THE WHITE MATRIX IN IT.

BAG 430		GLASS BALL	116-18694 XSB	07 01 33 15 LMP	HEY, -- HERE'S ANOTHER ONE OF THOSE GLASS
60135*	137.7		116-18695 XSB	07 01 33 22 CDR	BALLS.
			116-18696 LOC	07 01 34 46 CDR	YEAH, THAT'S A BIG ONE.
				07 01 34 51 CDR	THAT SON OF A GUN, MUST BE SOLID.
				07 01 35 02 CDR	HOUSTON, THIS GLASS BALL THAT'VE GOT DOESN'T HAVE
					ANY GIVE TO IT.
				07 01 35 14 CDR	GOING INTO BAG 380. (430)
					IMPA T?
					WELL IT'S SMOOTH ON ONE SIDE AND HAS IMPACT PITS
					ON THE OTHER.

FSR 10				07 01 36 25 CDR	OK, HERE'S THE HAMMER. OK, I'M TAKING THESE 2
FSR 97				07 01 36 29 LMP	BIG ROCKS AND PUT THEM IN THE BIG ROCK BAG, CHARLIE.
					OK, MULEY'S GOT TO GO IN THERE TOO.

EVA 3 - STATION: 10' (PRIME)

U27/L32 DOUBLE DRIVE TUBL 116-18698 DS 07 01 35 10 LMP OK, DOUBLE CORE'S ASSEMBLED.
60J14/ 570.3 116-18699 DS 07 01 36 46 LMP HEY, TONY, I PUSHED IT ALL IN ON ALMOST THREE-
60013 757.3 116-18700 DS 07 01 37 02 LMP QUARTERS OF THE WAY ON THE BOTTOM CORE.
118-18697 LOC 07 01 37 05 LMP JOHN, COULD YOU --
-- TAKE A PICTURE OF THAT FOR ME? I DON'T HAVE
MY CAMERA.
07 01 39 10 LMP HEY, TONY, AT THIS BOTTOM OF THIS CORE IT LOOKS
WHITISH, AND IT'S PRETTY COARSE GRAIN -- NOT REAL
FINE. IT'S SORT OF LIKE A CRUMBLY SHOCKED ROCK.
07 01 40 53 LMP OK, THE BOTTOM WAS 32, TONY. TOP IS 27.

FSR 11 ROCK 116-18701 XSB 07 01 37 13 CC AND JOHN, WHILE YOU'RE LOOKING AROUND THERE, OUR
60019 1887.0 116-18702 XSB NUMBER ONE PRIORITY IS A VESICULAR BASALT.
116-18703 USB I'M LOOKING, BUT I'M NOT SEEING ANY BASALT.
116-18704 XSA 07 01 39 48 CDR OK, AFTER YOU GET THIS CORE PACKED UP, WHY DON'T
YOU DRIVE ON BACK TO THE LM TO THE NORMAL CLOSEOUT
POSITION, AND WE'LL LET YOU SAMPLE AROUND THERE --
SEE IF YOU CAN FIND ONE AROUND THERE. YOU DESCRIBED
SOMETHING IN A CRATER BEHIND THE LM.
07 01 42 20 CDR I JUST PICKED UP ANOTHER BRECCIA, BUT IT WAS
INTERESTING BECAUSE IT HAD SOME VERY DARK CLASTS
IN IT, AND IT WAS PRIMARILY A WHITE MATRIX.
07 01 42 38 CDR THE CLASTS WERE VERY DARK.
07 01 42 47 CDR YOU WANT THIS TO GO IN YOUR BAG, CHARLIE?
07 01 42 49 LMP YEAH, WHY DON'T YOU --
07 01 42 51 LMP STICK IT IN MINE -- I THINK WE HAVE PLENTY OF
ROOM IN MINE.

BAG 13 ROCK 116-18705 XSB 07 01 45 49 CDR I JUST GOT A SPECTACULAR WHITE ROCK. BUT IT'S
60215* 385.8 116-18706 XSB KINDA DUST COATED, IT'S SO FINE GRAIN'D THAT I
116-18707 XSB CAN'T SEE ANY CRYSTALLINE STRUCTURE ASSOCIATED
WITH IT. IT'S SORTA COVERED WITH ZAP, YOU CAN
SEE PLENTY OF ZAP PITS. THAT'S GOING IN BAG 13.

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AND EXCERPTS FROM THE AIR-TO-GROUND TRANSCRIPT

SAMPLE NUMBER	WEIGHT (G)	SAMPLE TYPE	LUNAR-SURFACE PHOTOGRAPHS	AET	CREW COMMENTS
EVA 3 - STATION: LM					
BAG 15 60235*		ROCK	117-18828 XSB 117-18829 XSB	07 01 47 29	LMP HEY, TONY, I JUST PICKED UP ONE THAT IS IN BAG 15 THAT HAS A BLACK MATRIX. BLuish BLACK MATRIX WITH LATH-LIKE EITHER CLASTS OR PHENOCRYST IN IT. AND IT'S RIGHT BEHIND THE LM HERE. I DON'T KNOW IF THAT'S WHAT WE'RE LOOKING FOR OR NOT. THERE ARE A LOT OF THE ROCKS THAT I CALL VESICULAR BASALTS AROUND HERE, BUT I DON'T KNOW WHETHER WHAT I REALLY CALLED WAS CORRECT OR NOT. THAT MIGHT HAVE LEAD YOU ALL ASTRAY. THAT MIGHT HAVE BEEN JUST THE GLASS COATING ON THE ROCK.
BAG 17 60255*		ROCK	117-18830 XSB 117-18831 XSB 117-18832 XSB	07 01 49 28 07 01 49 49 07 01 50 57	LMP OKAY, TONY, I'VE PICKED UP A ROCK HERE THAT HAS AN APHANITIC MATRIX WITH PERHAPS 30 PERCENT OF IT -- WHITISH MILLIMETER SIZE CLAST OR PHENOCRYST AND IT DOESN'T LOOK GLASSY TO ME. IT'S GOOD HALF OF A GRAPEFRUIT SIZE. OKAY, AND IT'S GOING IN BAG 17.
BAG 18 60275	255.2	ROCK	117-18833 XSB 117-18834 XSB 117-18835 XSA	07 01 55 23 07 01 55 31 07 01 56 01	CC LMP LMP AND CHARLIE, YOU CAN CONTINUE SAMPLING FOR ABOUT 5 MORE MINUTES AND THEN WE'LL HAVE TO LOAD UP. OKAY. THAT'S ABOUT 3 SAMPLES. I'LL BE OUT OF BAGS THEN ANYWAY. TONY, I'LL SAY ONE THING THAT THE CHARACTER OF THE REGOLITH HAS REALLY CHANGED BETWEEN HERE AND STONE MOUNTAIN AND - THERE'S A GRAB SAMPLE IN 18. WELL, IT'S PARTIALLY DOCUMENTED I SHOULD SAY, NOT A GRAB SAMPLE.

BAG 20 60315	787.7	CRYSTALLINE ROCK	117-18836 XSB 117-18837 XSB 117-18838 XSB	07 01 56 44 LMP 07 01 57 31 LMP 07 01 57 38 LMP 07 01 58 01 LMP 07 01 58 05 LMP	07 01 56 44 LMP 07 01 57 31 LMP 07 01 57 38 LMP 07 01 58 01 LMP 07 01 58 05 LMP	THERE'S A NEAT ROCK. RIGHT THERE. DOESN'T LOOK LIKE A BRECCIA. AND, TONY THE LAST ONE I PICK UP IS AN IGNEOUS ROCK, NO BRECCIA. AND IT'S GOT LATH CRYSTALS IN IT AND A BLACK MATRIX BUT IT IS NOT BASALTIC. WELL, IT WAS GOING IN BAG 19, IT'S NOT ANYMORE. IN BAG NUMBER 20, TONY.

FSR 12? (FSR 4?) 60016	4307.0	ROCK	110-17866 XSB 110-17867 XSB 110-17868 DSA	07 02 16 50 CDR 07 02 16 58 LMP 07 02 17 04 CDR	07 02 16 50 CDR 07 02 16 58 LMP 07 02 17 04 CDR	I GOT ONE MORE ROCK HERE THAT I WAS LOOKING AT OUT OF THE WINDOW OF THE LM, I GOT PLENTY OF PICTURES OF IT FOR YOU. PUT IT IN THE BIG ROCK BAG -- IT'LL GO IN THAT ETB - IT'S NOT ALL THAT BIG.

BAG 331 60335*		ROCK FOR LPM	116-18712 XSB 116-18713 XSB 116-18720 LPM 116-18721 LPM	07 02 32 05 CC 07 02 34 16 LMP 07 02 35 20 LMP 07 02 35 25 CC	07 02 32 05 CC 07 02 34 16 LMP 07 02 35 20 LMP 07 02 35 25 CC	OKAY, CHARLIE, WHY DON'T YOU GO ON OUT WHERE JOHN IS AND SEE IF YOU CAN FIND AN IGNEOUS OR A HARD BRECCIA TO PUT ON TOP OF THAT LPM. USE HIS CAMERA TO DOCUMENT IT. OKAY, HARD BRECCIA OR IGNEOUS ROCK. DO YOU WANT THIS ROCK BROUGHT BACK, TONY - THAT IS THAT I'M GOING TO --- FOR THE LPM. ROG. WE'D LIKE YOU TO DOCUMENT IT BEFORE YOU TOUCH IT AND WHEN YOU GET THE LPM FIRST MEASURE- MENT, WE'LL PUT IT ON THE LPM, TAKE A PICTURE OF IT ON THE LPM, AND THEN WE'LL GET AN LPM MEASUREMENT OF IT, AND THEN PACK IT AND BRING IT BACK.