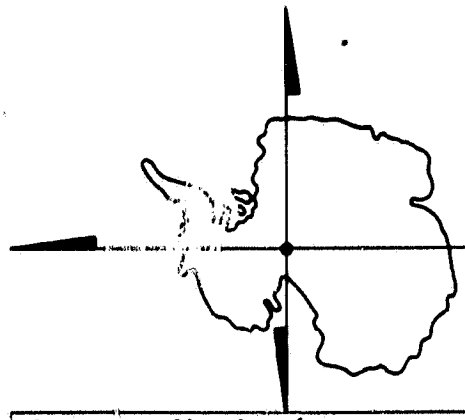


Antarctic Meteorite NEWSLETTER

A periodical issued by the Antarctic Meteorite Working Group to inform scientists of the basic characteristics of specimens recovered in the Antarctic.

Volume 5, Number 1 — Februar , 1982

Supported by the National Science Foundation, Division of Polar Programs, and compiled at Code SN2, Johnson Space Center, NASA, Houston, Texas 77058

The 1981/82 Antarctic Search for Meteorites expedition has completed the most successful collection season since the program began in 1976. Dr. William A. Cassidy, principal investigator and chairman of the Meteorite Working Group, reports the following finds from the Allan Hills area:

361 ordinary chondrites
4 carbonaceous chondrites
6 achondrites
2 irons

for a total of 373 specimens. He also reported that 13 specimens measured over 11 centimeters in diameter and 69 between 5-10 centimeters in diameter. The remainder of the finds were small plus many were paired. One of the irons was estimated to weigh about 20 kilograms.

The 1981/82 finds are being returned to the United States by ship and are expected to arrive in California in March. The specimens will be kept frozen during transit including the last part of the trip from California to the Johnson Space Center in Houston. Additional information on these new finds should be available for the next newsletter.

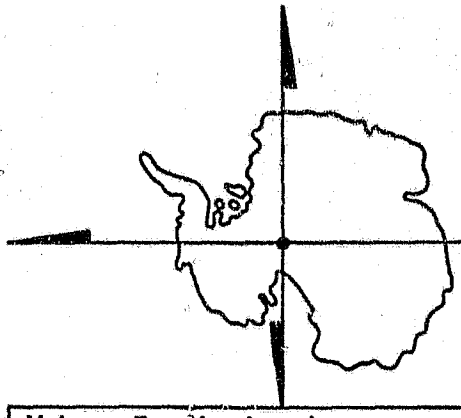
The Meteorite Working Group will meet from April 16-18, 1982, at the Lunar and Planetary Institute, Houston, for the purpose of reviewing requests for Antarctic meteorites. Meteorite specimens that have been reported in this and other newsletters are eligible for issue to qualified researchers who express their requirements in writing to:

The Secretary
Meteorite Working Group
Code SN2
NASA, Johnson Space Center
Houston, TX 77058

Request must arrive in the secretary's office before April 10th to be considered by the MWG.

The request for sample should state specifically the sample required (number, weight needed, special handling or packaging needs) and a description of the intended research. The MWG makes its decisions based upon written requests from researchers so it is imperative that the requests be specific and complete.

SGT



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Antarctic Meteorite Descriptions 1980

NASA
National Aeronautics and Space Administration

Curatorial Branch

Lyndon B. Johnson Space Center
Houston, Texas
77058

Publication 60

JSC 18170

ANTARCTIC METEORITE DESCRIPTIONS
1980

ROBERTA SCORE
CAROL M. SCHWARZ
BRIAN MASON
DONALD D. BOGARD

FEBRUARY, 1982

This catalog is a complete listing of the 1980 U. S. Antarctic Meteorite Collection. Formal requests for meteorite samples for scientific research should be submitted in writing to:

Secretary, Meteorite Working Group
Curator's Branch, SN2
NASA, Johnson Space Center
Houston, TX 77058

The Antarctic Meteorite Working Group meets twice yearly, usually in April and September, to consider sample requests. The April meeting is in Houston, Texas and the September meeting is in Washington, D.C. Sample requests may be submitted at any time, but must reach the Secretary of the MWG at least a few days prior to a given meeting. The MWG reviews all sample requests received since its last meeting and makes recommendations on allocations to the Polar Programs Division of the National Science Foundation. Upon NSF approval of these allocations, they will be prepared by either NASA, JSC (for stones) or the Smithsonian Institution (for irons).

Special provision has been established to make a limited number of allocations between meetings of the MWG. Such allocations must meet certain requirements, e.g., limited numbers of polished thin sections, small amounts of ordinary meteorites, or additional material related to previous allocations. If you require rapid allocation and your sample request meets these requirements, you may ask for rapid consideration. Only a limited number of such requests can be handled, and a justification must be given.

We would like to thank Jeanette Simon, Nell McComb, Alene Simmons and John O. Annexstad for their assistance on the compilation of this catalog.

1980 ANTARCTIC METEORITE SUMMARY

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
ALHA80101	8725.0	L-6 Chondrite	B	B	3
ALHA80102	471.2	Polymict Eucrite	A	B	4
ALHA80103	535.9	L-6 Chondrite	B	A	4
ALHA80104	882.0	Iron-Ataxite	B	A	5
ALHA80105	445.1	L-6 Chondrite	B	B	5
ALHA80106	432.2	H-4 Chondrite	C	B	6
ALHA80107	177.8	L-6 Chondrite	B	B	6
ALHA80108	124.5	L-6 Chondrite	B	B	7
ALHA80110	167.6	L-6 Chondrite	B	B	8
ALHA80111	42.4	H-5 Chondrite	B	A	9
ALHA80112	330.7	L-6 Chondrite	B	B	9
ALHA80113	312.6	L-6 Chondrite	B	B/C	10
ALHA80114	232.8	L-6 Chondrite	B	B	10
ALHA80115	306.0	L-6 Chondrite	B	A	10
ALHA80116	191.2	L-6 Chondrite	B/C	B	11
ALHA80117	89.0	L-6 Chondrite	B	A	11
ALHA80118	2.4	H-6 Chondrite	B	A	12
ALHA80119	3.7	L-6 Chondrite	B	B	12
ALHA80120	60.0	L-6 Chondrite	B	B	13
ALHA80121	39.1	H-4 Chondrite	B/C	C	13
ALHA80122	49.8	H-6 Chondrite	B/C	B	14
ALHA80123	27.8	H-5 Chondrite	C	A	14
ALHA80124	11.9	H-5 Chondrite	B	B	15
ALHA80125	139.2	L-6 Chondrite	B/C	B	15
ALHA80126	34.5	H-6 Chondrite	A/B	A	16
ALHA80127	47.4	H-5 Chondrite	B	A	16
ALHA80128	138.2	H-4 Chondrite	B	B/C	17
ALHA80129	93.4	H-5 Chondrite	B	A	17
ALHA80130	5.3	H-6 Chondrite	B/C	A	18
ALHA80131	19.8	H-4 Chondrite	B	B	18
ALHA80132	152.8	H-5 Chondrite	B	B	19
ALHA80133	3.6	C3V Carb. Chon.	B	B	19
RKPA80201	813.0	H-6 Chondrite	B	A	20
RKPA80202	544.5	L-6 Chondrite	B	A	20
RKPA80203	3.8	H-6 Chondrite	C	A	21
RKPA80204	15.4	Eucrite	A	A	22
RKPA80205	53.8	H-3 Chondrite	B	B	23
RKPA80206	46.6	H-6 Chondrite	C	B	23
RKPA80207	17.7	L-3 Chondrite	C	B	24
RKPA80208	10.2	H-6 Chondrite	B	A	24
RKPA80209	9.7	L-5 Chondrite	C	B	25
RKPA80210	10.6	H-5 Chondrite	B/C	B	25
RKPA80211	2.1	H-6 Chondrite	C	B	26
RKPA80213	19.1	H-6 Chondrite	B/C	B	26
RKPA80214	4.9	H-6 Chondrite	C	B	26

1980 ANTARCTIC METEORITE SUMMARY

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
RKPA80215	9.0	L-6 Chondrite	C	B	27
RKPA80216	44.3	L-4 Chondrite	B	B	27
RKPA80217	7.8	H-5 Chondrite	C	A	28
RKPA80218	6.7	H-5 Chondrite	C	A	28
RKPA80219	21.5	L-6 Chondrite	B	A	29
RKPA80220	124.5	H-5 Chondrite	B/C	B/C	29
RKPA80221	91.9	H-6 Chondrite	C	B/C	30
RKPA80222	6.9	LL-6 Chondrite	B	B	30
RKPA80223	25.1	H-5 Chondrite	C	B	31
RKPA80224	8.0	Unbrecciated Eucrite	A/B	A	31
RKPA80225	8.3	L-6 Chondrite	C	A	32
RKPA80226	160.3	Iron-Octahedrite	B	A	32
RKPA80227	7.7	H-5 Chondrite	B/C	A	33
RKPA80228	11.1	L-5 Chondrite	C	B	34
RKPA80229	14.1	Mesosiderite	C	B/C	34
RKPA80230	58.2	H-5 Chondrite	B	B	35
RKPA80231	238.1	H-6 Chondrite	C	B/C	35
RKPA80232	80.1	H-4 Chondrite	B	A	36
RKPA80233	413.5	H-5 Chondrite	B/C	B	36
RKPA80234	136.2	LL-5 Chondrite	B	B	37
RKPA80235	261.2	LL-6 Chondrite	A/B	B	37
RKPA80236	15.6	H-5 Chondrite	B/C	B	38
RKPA80237	22.2	H-4 Chondrite	C	B	38
RKPA80238	18.4	LL-6 Chondrite	A/B	A	39
RKPA80239	5.6	Urellite	B	B	39
RKPA80240	61.4	H-5 Chondrite	C	A	40
RKPA80241	0.6	C3V Carb. Chon.	B	B	40
RKPA80242	7.3	L-4 Chondrite	B/C	B	41
RKPA80243	3.4	H-5 Chondrite	C	A	41
RKPA80244	14.2	H-5 Chondrite	C	B	42
RKPA80245	36.7	H-5 Chondrite	B/C	B	42
RKPA80246	5.8	Mesosiderite	C	C	43
RKPA80247	1.1	H-5 Chondrite	C	B	43
RKPA80248	11.3	LL-6 Chondrite	A/B	A	44
RKPA80249	9.7	H-5 Chondrite	B/C	A	44
RKPA80250	3.9	H-5 Chondrite	B/C	A	45
RKPA80251	29.1	H-5 Chondrite	B	B	45
RKPA80252	11.2	L-6 Chondrite	A/B	A	46
RKPA80253	4.6	[illegible]-5 Chondrite	A/B	A	46
RKPA80254	68.5	H-6 Chondrite	C	B/C	47
RKPA80255	6.7	H-6 Chondrite	C	B	47
RKPA80256	153.2	L-3 Chondrite	B	A	47
RKPA80257	8.5	H-5 Chondrite	B/C	B	48
RKPA80258	4.3	Mesosiderite	B/C	B	49
RKPA80259	20.2	E-5 Chondrite	B/C	B	49

1980 ANTARCTIC METEORITE SUMMARY

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
RKPA80260	7.5	H-5 Chondrite	C	B	50
RKPA80261	61.6	L-6 Chondrite	B	A	50
RKPA80262	32.1	H-6 Chondrite	C	B	51
RKPA80263	16.7	Mesosiderite	C	B	51
RKPA80264	23.9	L-6 Chondrite	B	B	52
RKPA80265	7.8	H-6 Chondrite	C	B	52
RKPA80266	9.8	H-6 Chondrite	B/C	B	53
RKPA80267	24.2	H-4 Chondrite	C	A	53
RKPA80268	3.4	L-5 Chondrite	B/C	B	54
OTTA80301	35.5	H-3 Chondrite	B/C	B	55

IRON METEORITES

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
ALHA80104	882.0	Iron-Ataxite	B	A	5
RKPA80226	160.3	Iron-Octahedrite	B	A	32

CARBONACEOUS CHONDRITES

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
ALHA80133	3.6	C3V Carb. Chon.	B	B	19
RKPA80241	0.6	C3V Carb. Chon.	B	B	40

CHONDRITES - TYPE 3

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
RKPA80205	53.8	H-3 Chondrite	B	B	23
RKPA80207	17.7	L-3 Chondrite	C	B	24
RKPA80256	153.2	L-3 Chondrite	B	A	47
OTTA80301	35.5	H-3 Chondrite	B/C	B	55

CHONDRITES - TYPE 4

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
ALHA80106	432.2	H-4 Chondrite	C	B	6
ALHA80121	39.1	H-4 Chondrite	B/C	C	13
ALHA80128	138.2	H-4 Chondrite	B	B/C	17
ALHA80131	19.8	H-4 Chondrite	B	B	18
RKPA80216	44.3	L-4 Chondrite	B	B	27
RKPA80232	80.1	H-4 Chondrite	B	A	36
RKPA80237	22.2	H-4 Chondrite	C	B	38
RKPA80242	7.3	L-4 Chondrite	B/C	B	41
RKPA80267	24.2	H-4 Chondrite	C	A	53

ACHONDRITES

NUMBER	WEIGHT (GMS)	CLASSIFICATION	WEATHERING	FRACTURING	PAGE
ALHA80102	471.2	Polymict Eucrite	A	B	4
RKPA80204	15.4	Eucrite	A	A	22
RKPA80224	8.0	Unbrecciated Eucrite	A/B	A	31
RKPA80229	14.1	Mesosiderite	C	B/C	34
RKPA80239	5.6	Urellite	B	B	39
RKPA80246	5.8	Mesosiderite	C	C	43
RKPA80258	4.3	Mesosiderite	B/C	B	49
RKPA80263	16.7	Mesosiderite	C	B	51

Confirmed and probable pairings of 1980 Allan Hills and Reckling Peak meteorites:

L4: RKPA80216, 242

H5: ALHA80111, 124, 127, 129, 132

H5: RKPA80217, 218

H5: RKPA80220, 223

H5: RKPA80250, 251

H6: ALHA80122, 126, 130

H6: RKPA80203, 206, 208, 211, 213, 214, 221, 231, 254, 255, 262, 265, 266

L6: ALHA80101, 103, 105, 107, 108, 110, 112, 113, 114, 115, 116, 117, 119, 120, 125

L6: RKPA78001, 78003, 79001, 79002, 80202, 80219, 80225, 80261, 80264

LL6: RKPA80222, 238, 248

Mesosiderite: RKPA79015, 80229, 80246, 80258, 80263

1980 COLLECTION

Sample No.: ALHA80101 Location: Allan Hills
Field No.: 102
Weight (gms): 8725.0
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
The sample has black fusion crust on two surfaces. The texture of the rest of the meteorite is rough and has weathered to a reddish-brown color. Some distinct chondrules or clasts that are cream colored can be distinguished. The sample shows linear fractures which are more severely weathered.

The interior of this stone is gray with numerous oxidation halos. A darker gray weathering rind is discontinuous. Where broken along fractures, some white evaporate deposit was exposed.

This specimen is similar to ALHA80103 and ALHA80105. The samples have weathered too much to fit together as one sample.

Dimensions: 31 x 17 x 15 cm.

Petrographic Description: Brian Mason
Chondrules are sparse and poorly defined, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of plagioclase, troilite, and nickel-iron. A moderate amount of limonitic staining is present around the nickel-iron grains. Microprobe analyses gave the following mineral compositions: olivine, Fa_{24}; orthopyroxene, Fs_{20}; plagioclase, An_{11}. The meteorite is classified as an L6 chondrite.

Polished thin sections of ALHA80103, 80105 are identical in texture, mineral compositions, and degree of weathering with ALHA80101, indicating that these three specimens are pieces of a single meteorite.

Sample No.: ALHA80102 Location: Allan Hills
Field No.: 1020
Weight (gms): 471.2
Meteorite Type: Polymict Eucrite

Physical Description: Roberta Score
Shiny black fusion crust covers all but one surface of this achondrite. The exterior surfaces have many vugs, typical of the other Allan Hills polymict eucrites, ranging in size from <1 mm to >1 cm.

Chipping revealed an interior that is medium gray colored with mm sized white, yellow, and black clasts throughout. Several larger clasts (up to 1 cm. longest dimension) were noted.

Dimensions: 12.5 x 8 x 5.5 cm.

Petrographic Description: Brian Mason
The section shows a breccia of angular fragments, up to 1 mm across, of pigeonite and plagioclase and a few lithic clasts, in a matrix of comminuted pyroxene and plagioclase. The lithic clasts consist of pyroxene and plagioclase and range in texture from doleritic to gabbroic. Accessory ilmenite was noted. No evidence of weathering was seen. Microprobe analyses show pigeonite ranging in composition from $Wo_6Fs_{34}En_{60}$ to $Wo_{12}Fs_{52}En_{36}$; a few grains of ferroaugite, averaging $Wo_{33}Fs_{30}En_{37}$, were analyzed. Plagioclase ranges in composition from An_{76} to An_{94}, with an average of An_{87}. The meteorite is classified as a polymict eucrite (pyroxene-plagioclase achondrite), and resembles the other polymict eucrites collected at the Allan Hills.

Sample No.: ALHA80103 Location: Allan Hills
Field No.: 1068
Weight (gms): 535.9
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
The specimen has no fusion crust except for an area <1 cm^2. ALHA80103 has a rough texture and has weathered reddish-brown. Unweathered areas are gray with some ~2 mm clasts distinguishable. A linear fracture runs paralled to the S surface which is smooth and reddish-brown. Sample has broken off in places leaving a flat surface. This feature is also present on ALHA80101 and 80105.

Chipping revealed an interior which is yellow-gray in color and friable. A discontinuous gray weathering rind is present. Some 3-5 mm clasts are barely visible. Oxidation halos are present as are metal flecks.

Dimensions: 10.5 x 7 x 5 cm.

Petrographic Description: Brian Mason
Polished sections of ALHA80101, 80103, 80105 are identical in texture, mineral compositions, and degree of weathering, indicating that these three specimens are pieces of a single meteorite.

Sample No.: ALHA80104 Location: Allan Hills
Field No.: 1011
Weight (gms): 882.0
Meteorite Type: Ataxite

Physical Description: Roy S. Clark, Jr.
This specimen is an irregularly shaped individual, 11 cm x 7 cm x 4 cm. One prominent rounded surface appears to have been ablation-shaped, and a second fairly large and comparatively smooth surface appears to have been the under side while the specimen was exposed at the surface of the ice. The meteorite is covered with a fairly uniform dark reddish brown iron oxide, and no fusion crust seems to remain. There are several deep linear incisions into the body of the meteorite that are possibly due to either preferential ablation or weathering of schreibersite inclusions exposed at the surface.

Tentative Classification: Roy S. Clarke, Jr.
A microetched surface area of approximately 7 cm^2 was examined. A heat-altered zone is present over part of the external surface of the specimen. The metallographic matrix is a martensitic plessite. Kamacite spindles less than 0.1 mm wide, and generally less than ten times their width in length, are moderately uniformly distributed in a vague Widmanstätten pattern orientation. The kamacite spindles frequently enclose small schreibersites. Three large schreiberite areas enclosed in swathing kamacite as wide as 0.2 mm are present. The largest such area is 8 mm long. Weathering has penetrated 0.5 cm into the mass in one area. Chemical data and a more thorough metallographic examination will be required to classify this meteorite precisely.

Sample No.: ALHA80105 Location: Allan Hills
Field No.: 1066
Weight (gms): 445.1
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
This sample is not a complete specimen. It has no fusion crust except for 2 or 3 small spots that may be remnant fusion crust. Some ~3 mm chondrules are visible. Several linear fractures which are heavily weathered are present and are similar to those in ALHA80101 and 80103.

The interior is gray with oxidation halos and metal flecks. A discontinuous 2 mm thick weathering rind is present.

Dimensions: 12 x 6.5 x 3.5 cm.

Petrographic Description: Brian Mason
Polished thin sections of ALHA80103, 80105 are identical in texture, mineral compositions, and degree of weathering with ALHA80101, indicating that these three specimens are pieces of a single meteorite.

Sample No.: ALHA80106 Location: Allan Hills
Field No.: 1021, 1022
Weight (gms): 432.2
Meteorite Type: H4 Chondrite

Physical Description: Carol Schwarz
ALHA80106 consists of five pieces, one of which had a different field number. That piece plus three others fit together. The fifth piece does not. The sample has patches of shiny black fusion crust on all sides except T which appears to be a fracture surface. Areas devoid of fusion crust are smooth and reddish brown. The interior of this stone is totally weathered.

Dimensions: 6 x 9.5 x 10 cm.

Petrographic Description: Brian Mason
Chondritic structure is well developed, with chondrules ranging from 0.2-1.2mm across; the commonest types are granular and porphyritic olivine, barred olivine, and fine-grained radiating pyroxene. The chondrules are set in a fine-grained granular groundmass of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Some of the pyroxene is polysynthetically twinned clinobronzite. Weathering is pervasive, with brown limonitic staining throughout the section. Microprobe analyses show uniform olivine composition (Fa_{19}) and moderately variable pyroxene (Fs_{16-19}, average Fs_{17}).

The meteorite is classified as an H4 chondrite.

Sample No.: ALHA80107 Location: Allan Hills
Field No.: 1060
Weight (gms): 177.8
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
This specimen consists of six pieces which appear similar to ALHA80101. Only one has a dull back fusion crust present. The other pieces are rough and weathered to a reddish-brown color. Several show severe weathering along fractures.

Dimensions: Range from 6 x 5 x 2.5 cm to 1.3 x 1 x .7 cm

Petrographic Description: Brian Mason
Chondritic structure is barely perceptible, the sparse chondrules merging with the granular matrix, which consists of olivine and pyroxene, with minor amounts of plagioclase, nickel-iron, and troilite. A minor amount of brown limonitic staining is present around the nickel-iron grains. Microprobe analyses gave the following compositions: olivine, Fa_{24} orthopyroxene, Fs_{20}; plagioclase, An_{11}. The meteorite is classified as an L6 chondrite.

Sample No.: ALHA80108 Location: Allan Hills
Field No.: 1094
Weight (gms): 124.5
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
The sample has no fusion crust. It is rough and weathered reddish brown and is similar to ALHA80101. Some light colored chondrules or clasts are visible.

Chipping revealed a light gray interior with some oxidation halos and a dark gray weathering rind.

Dimensions: 7 x 5 x 3.5 cm

Petrographic Description: Brian Mason
The physical description indicated that this specimen may be paired with ALHA80101, and this is confirmed by the microscopic examination, which shows that it is an L6 chondrite identical with that meteorite in texture, mineral compositions, and degree of weathering.

Sample No.: ALHA80110 Location: Allan Hills
Field No.: 1062
Weight (gms): 167.6
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
Only a small patch of weathered fusion crust remains on the exterior of this specimen. The interior is relatively fresh with metal obvious. A 2 mm discontinuous weathering rind is dark gray in color. This is in contrast to the whitish-gray interior material.

ALHA80110 is probably a fragment from ALHA80101.

Dimensions: 7 x 5.5 x 3 cm.

Petrographic Description: Brian Mason
Microscopic and microprobe examination has confirmed that ALHA80110, 80112, and 80115 are fragments of a single meteorite, along with ALHA80101, 80103, 80105, and ALHA80113, 80114, 80116, and 80125 are so similar that they can be included with a reasonable degree of certainty. In all of them chondrules are sparse and poorly defined, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of plagioclase, troilite and nickel-iron. A moderate amount of limonitic staining is present around the nickel-iron grains. Microprobe analyses gave the following mineral compositions: olivine, Fa_{24}; orthopyroxene, Fs_{20}; plagioclase, An_{10-11}; grains of merrillite were analyzed in ALHA80110, 80115, 80125. These specimens are all L6 chondrites.

The sections of ALHA80115, 80116, and 80125 have thin (0.1-0.2 mm) veinlets consisting largely of brown isotropic material (possibly ringwoodite and majorite); plagioclase near these veinlets is partly converted to maskelynite, with CaO content (2.0-2.2%) appropriate to oligoclase composition, but with deficient and variable Na_2O content.

Sample No.: ALHA80111 Location: Allan Hills
Field No.: 1016
Weight (gms): 42.4
Meteorite Type: H5 Chondrite

Physical Description: Carol Schwarz
The specimen is totally covered with smooth thin black fusion crust. The bottom is shiny and iridescent while the remainder is dull with some polygonal fracturing.

The interior of the stone is gray with some oxidation halos.

Dimensions: 4.5 x 4 x 2.5 cm

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, but the margins of many of the chondrules are diffuse, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Brown limonitic staining surrounds the nickel-iron grains. Microprobe analyses gave the following compositions: olivine, Fa_{18}; orthopyroxene, Fs_{16}. A little fine-grained plagioclase, An_{12}, was analyzed, and one grain of merrillite. The meteorite is classified as an H5 chondrite.

Sample No.: ALHA80112 Location: Allan Hills
Field No.: 1061
Weight (gms): 330.7
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
Brown and black fusion crust covers only two surfaces while the other surfaces are reddish-brown in color. The interior contains a large weathering rind with a moderately weathered matrix.

Sample is probably a fragment of ALHA80101.

Dimensions: 10 x 5 x 7 cm.

Petrographic Description: Brian Mason
Refer to ALHA80110 for description.

Sample No.: ALHA80113 Location: Allan Hills
Field No.: 1064
Weight (gms): 312.6
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
Exterior is reddish-brown in color with a few angular yellow clasts visible. Sample broke along a pre-existing crack which has been extremely weathered. It is hard to tell if further chipping would reveal less weathered material.

Dimensions: 7 x 5 x 4.5 cm.

Petrographic Description: Brian Mason
Refer to ALHA80110 for description.

Sample No.: ALHA80114 Location: Allan Hills
Field No.: 1067
Weight (gms): 232.8
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
No fusion crust is present on this orangish-brown specimen. Though the exterior is weathered, several inclusions are obvious. A partial weathering rind (~2 mm thick) was exposed when the sample was chipped. The interior is spotted with oxidation.

ALHA80114 is related to ALHA80101.

Dimensions: 10 x 5 x 3 cm.

Petrographic Description: Brian Mason
Refer to ALHA80110 for description.

Sample No.: ALHA80115 Location: Allan Hills
Field No.: 1065
Weight (gms): 306.0
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
No fusion crust is present on this rounded, orangish-brown colored specimen. A 3 cm diameter weathered troilite (?) grain is visible on the exterior of this stone. The interior material is light-gray with some orangish oxidation.

ALHA80115 is probably a fragment from a common fall along with ALHA80101.

Dimensions: 6.5 x 6.5 x 5.5 cm.

Petrographic Description: Brian Mason
Refer to ALHA80110 for description.

Sample No.: ALHA80116 Location: Allan Hills
Field No.: 1069
Weight (gms): 191.2
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
The exterior of the specimen has weathered to a deep reddish-brown color. No fusion crust exists. The interior is mostly weathered though some fresh metal is obvious. A 2-3 cm continuous weathering rind is present.

Dimensions: 8.5 x 5.5 x 2.5 cm.

Petrographic Description: Brian Mason
Refer to ALHA80110 for description.

Sample No.: ALHA80117 Location: Allan Hills
Field No.: 1063
Weight (gms): 89.0
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
This sample has no fusion crust and is rough and weathered reddish brown. Some light colored chondrules or clasts are visible. It is similar to ALHA80101.

The interior of the specimen is light gray with oxidation halos. A dark gray weathering rind is present along the "T" surface.

Dimensions: 4 x 3 x 1.8 cm

Petrographic Description: Brian Mason
Thin section of this specimen is identical in all respects with ALHA80107 and ALHA80101.

Sample No.: ALHA80118 Location: Allan Hills
Field No.: 1010
Weight (gms): 2.4
Meteorite Type: H6 Chondrite

Physical Description: Carol Schwarz
This small specimen is completely covered with fusion crust. The bottom is shiny black with reddish areas and pitted. The remaining surfaces are a dull black.

Chipping revealed a thick fusion crust with a small area of light gray matrix.

Dimensions: 2 x 1.3 x 6 cm

Petrographic Description: Brian Mason
Chondritic structure is practically absent, the specimen consisting largely of granular olivine and pyroxene, with minor amounts of nickel-iron, plagioclase, and troilite. Well-preserved fusion crust, up to 3 mm thick, rims part of the section. The specimen shows few signs of weathering. Microprobe analyses gave the following compositions: olivine, Fa_{17}; orthopyroxene, Fs_{15}; plagioclase, An_{13}. The meteorite is classified as an H6 chondrite.

Sample No.: ALHA80119 Location: Allan Hills
Field No.: 1028
Weight (gms): 33.7
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
This specimen is similar to ALHA80101. It is completely devoid of fusion crust and is rough and weathered reddish brown. Less weathered areas show a gray matrix with 2-5 mm clasts or chondrules.

The interior is light gray with oxidation halos and has a dark gray weathering rind along one face.

Dimensions: 4 x 3 x 1.8 cm

Petrographic Description: Brian Mason
Thin section of this specimen is identical in all respects with ALHA80107 and ALHA80101.

Sample No.: ALHA80120 Location: Allan Hills
Field No.: 1025
Weight (gms): 60.0
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
There is no fusion crust on this specimen except for a small area on the B face. The remainder of the sample is rough and weathered similar to ALHA80101. Although there are few distinct fractures its roughness causes it to be quite friable.

The interior is light gray with oxidation halos and a dark gray weathering rind. A 7mm chondrule was separated during chipping.

Dimensions: 6 x 3 x 2 cm

Petrographic Description: Brian Mason
Chondrules are sparse and poorly defined, tending to merge with the granular matrix, which consists largely of olivine and pyroxene, with minor amounts of plagioclase, troilite, and nickel-iron. A moderate amount of limonitic staining is present around nickel-iron grains. Microprobe analyses gave the following mineral compositions: olivine, Fa_{24}, orthopyroxene, Fs_{20}; plagioclase, An_{11}. The meteorite is classified as an L6 chondrite.

Sample No.: ALHA80121 Location: Allan Hills
Field No.: 1110
Weight (gms): 39.1
Meteorite Type: H4 Chondrite

Physical Description: Carol Schwarz
The sample has no fusion crust and is severely fractured and weathered to a deep reddish brown. The interior is yellowish in color from weathering. It is quite friable.

Dimensions: 4 x 3 x 2 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, with chondrules ranging up to 1.2 mm in diameter. A variety of chondrules is present, the commonest being granular olivine and olivine-pyroxene, barred olivine, and radiating pyroxene; some of the pyroxene is twinned clinobronzite. Considerable weathering is indicated by extensive limonitic staining around metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{19}; pyroxene Fs_{17}. The meteorite is classified as an H4 chondrite.

Sample No.: ALHA80122 Location: Allan Hills
Field No.: 1017
Weight (gms): 49.8
Meteorite Type: H6 Chondrite

Physical Description: Carol Schwarz
Fusion crust is present on all but one face of this angular specimen. Shallow regmaglypts occur on the fusion crust covered surfaces. The fusion crust is dull black and approximately 1 mm thick.

The interior is gray with some small chondrules or clasts visible. A brown weathering rind from 1 mm to 1 cm wide is present.

Dimensions: 4 x 3 x 2 cm

Petrographic Description: Brian Mason
Chondrules are present, but they are poorly defined and tend to merge with the granular groundmass, which consists mainly of olivine and pyroxene, with minor amounts of nickel-iron, plagioclase, and troilite. Brown limonitic staining is present in association with the nickel-iron. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}; plagioclase, An_{12}. The meteorite is classified as an H6 chondrite.

Sample No.: ALHA80123 Location: Allan Hills
Field No.: 1013
Weight (gms): 27.8
Meteorite Type: H5 Chondrite

Physical Description: Carol Schwarz
This is not a complete specimen. Two surfaces are covered with thin black fusion crust and the remainder is dark reddish-brown and iridescent.

Chipping revealed that the interior is totally weathered.

Dimensions: 4 x 3 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, but the chondrules are generally small, ranging up to 0.6 mm in diameter. Traces of fusion crust are present along one edge. Weathering is extensive, with limonitic staining and limonite veinlets throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: ALHA80124 Location: Allan Hills
Field No.: 1019
Weight (gms): 11.9
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
This sample is almost completely covered with dull black fusion crust. The interior is medium gray and contains clasts.

Several white 1 mm sized clasts are visible as well as smaller dark colored inclusions. A small weathering rind is present.

Dimensions: 2 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, but chondrule margins tend to merge with the granular groundmass, which consists of olivine and pyroxene with minor amounts of nickel-iron and troilite and possibly a little fine-grained plagioclase. Fusion crust is present along the edges. Weathering is limited to limonitic staining around metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{16}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: ALHA80125 Location: Allan Hills
Field No.: 1029
Weight (gms): 139.2
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
No fusion crust is present on this reddish-brown colored specimen. The interior of this stone is mostly weathered.

Dimensions: 6.5 x 4.5 x 3 cm.

Petrographic Description: Brian Mason
Refer to ALHA80110 for description.

Sample No.: ALHA80126 Location: Allan Hills
Field No.: 1015
Weight (gms): 34.5
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Brownish black fusion crust covers all but one surface. The fracture surface has been moderately weathered.

Chipping exposed a medium gray interior containing clasts. One particular clast is white and 1 x 1 cm in diameter. Other large clasts are also visible. Oxidation is scattered througnout but mainly as a discontinuous rind.

Dimensions: 4.5 x 2 x 2 cm

Petrographic Description: Brian Mason
Over most of the section chondritic structure is barely discernable, but one area shows well developed chondrules ranging up to 0.9 mm in diameter. The meteorite consists of olivine and pyroxene with minor amounts of nickel-iron, plagioclase, and troilite. Fusion crust bounds part of the section. Brown limonitic staining is present around metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{19}; pyroxene, Fs_{17}; plagioclase, An_{12}. The meteorite is classified as an H6 chondrite.

Sample No.: ALHA80127 Location: Allan Hills
Field No.: 1024
Weight (gms): 47.4
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Brownish-black fusion crust covers all but one surface of this meteorite. The fracture surface is weathered and rough in texture. Chondrules and clasts can easily be plucked out.

The interior is light gray in color with some oxidation. Small dark inclusions are present.

Dimensions: 4 x 3.5 x 2 cm

Petrographic Description: Brian Mason
Chondrules are moderately abundant, and range up to 1.8 mm in diameter. They are set in a granular matrix of olivine and pyroxene, with minor amounts of nickel-iron and troilite, and a little fine-grained plagioclase. Fusion crust is present along one edge. Brown limonitic staining surrounds the metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: ALHA80128 Location: Allan Hills
Field No.: 1026
Weight (gms): 138.2
Meteorite Type: H4 Chondrite

Physical Description: Roberta Score
Dull black fusion crust covers all but one surface of this meteorite. Several large fractures penetrate the specimen. Chipping exposed a medium gray interior speckled with white and dark gray inclusions.

Dimensions: 5 x 4.5 x 4 cm

Petrographic Description: Brian Mason
Chondrules are prominent, ranging up to 0.9 mm in diameter. They are set in a granular groundmass of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Brown limonitic staining occurs throughout the section, being concentrated around the nickel-iron grains. Traces of fusion crust are present along one edge. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16} (somewhat variable, Fs_{15-20}); one grain of diopside, $Wo_{45}Fs_7$ was analyzed. The meteorite is classified as an H4 chondrite.

Sample No.: ALHA80129 Location: Allan Hills
Field No.: 1027
Weight (gms): 93.4
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
All but two surfaces of this specimen are covered by blackish-brown fusion crust.

The interior is medium gray with white and dark gray inclusions. A .5 cm thick weathering rind is present on the interior of the sample.

Dimensions: 5.5 x 3.5 x 3 cm

Petrographic Description: Brian Mason
Chondrules are moderately abundant, but their margins tend to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron, troilite, and fine-grained plagioclase. The specimen is somewhat weathered, with considerable brown limonitic staining concentrated around nickel-iron grains. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{15}. The meteorite is classified as an H5 chondrite.

Sample No.: ALHA80130 Location: Allan Hills
Field No.: 1014
Weight (gms): 5.3
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
The exterior of this stone is highly weathered with only two small patches of fusion crust remaining. The interior is nearly completely weathered except for a small (2 x 2 mm) area of medium gray material.

Dimensions: 2 x 1.5 x 1 cm

Petrographic Description: Brian Mason
Chondrules are sparse and poorly developed, their borders merging with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of plagioclase, nickel-iron, and troilite. Brown limonitic staining is pervasive throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}; plagioclase, An_{12}; one grain of accessory merrillite was analyzed. The meteorite is classified as an H6 chondrite.

Sample No.: ALHA80131 Location: Allan Hills
Field No.: 1012
Weight (gms): 19.8
Meteorite Type: H4 Chondrite

Physical Description: Roberta Score
This sample consists of two fragments almost totally covered with fusion crust. Areas devoid of fusion crust expose rounded inclusions in moderately weathered material.

Chipping exposed a weathering rind and medium gray matrix with scattered light and dark inclusions.

Petrographic Description: Brian Mason
Chondritic structure is well developed, with chondrules ranging up to 1.2 mm in diameter. The matrix consists of fine-grained olivine and pyroxene, with minor amounts of nickel-iron and troilite. Weathering is extensive, with brown limonitic staining throughout the section and veinlets and patches of red-brown limonite. Microprobe analyses gave the following compositions: olivine, Fa_{19}; pyroxene, mean Fs_{18}, range Fs_{16-22}. The meteorite is classified as an H4 chondrite.

Sample No.: ALHA80132 Location: Allan Hills
Field No.: 1097
Weight (gms): 152.8
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Most of this flat stone is covered with dull brownish-black fusion crust. Flow bands are prominent on one surface. Several fractures penetrate into the interior. A large weathering rind was revealed when the specimen was chipped. The unweathered areas, which are light gray in color, contain inclusions.

Dimensions: 8 x 4.5 x 3 cm.

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, but chondrule margins are blurred, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Plagioclase was not certainly identified. Limonitic staining is extensive around metal grains, and veinlets of limonite are present near one edge of the section. Microprobe analyses gave the following mineral compositions: olivine, Fa_{18}; orthopyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: ALHA80133 Location: Allan Hills
Field No.: 1018
Weight (gms): 3.6
Meteorite Type: C3V Chondrite

Physical Description: Roberta Score
No fusion crust is present on this shiny reddish-brown specimen. The interior is highly weathered with some rounded inclusions visible.

Petrographic Description: Brian Mason
The section shows a close-packed mass of chondrules and chondrule fragments with a small amount of dark fine-grained matrix. Chondrules range from 0.3 to 1.5 mm in diameter, and show a diversity of type, the commonest being granular olivine and olivine-pyroxene, barred olivine, and fine-grained pyroxene. Transparent pale brown glass is present in some of the granular chondrules. Much of the pyroxene is polysynthetically twinned clinobronzite. Weathering is extensive, with brown limonitic staining throughout the section. Microprobe analyses show olivine and pyroxene have highly variable composition: olivine, $Fa_{0.5}$-Fa_{35}, mean Fa_{14}; pyroxene, Fs_5-Fs_{30}, mean Fs_{14}. The meteorite is tentatively classified as a C3V chondrite.

Sample No.: RKPA80201 Location: Reckling Peak
Field No.: 1300
Weight (gms): 813.0
Meteorite Type: H6 Chondrite

Physical Description: Carol Schwarz
This stone is completely covered with fusion crust except for a small corner on one surface (W). The fusion crust is black with brownish weathering spots and contains polygonal fractures. Another surface (N) contains several holes where something may have been plucked out. Minute amounts of white evaporite deposit are present in some of the polygonal fractures.

When the meteorite was chipped, the gray interior with metal flecks and some oxidation halos was exposed.

Dimensions: 12 x 6 x 5.5 cm.

Petrographic Description: Brian Mason
Chondrules are sparse and poorly defined, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron, plagioclase, and troilite. Minor limonitic staining is present around the nickel-iron grains. Microprobe analyses gave the following mineral compositions: olivine, Fa_{19}; orthopyroxene, Fs_{16}; plagioclase, An_{12}. The meteorite is classified as an H6 chondrite.

Sample No.: RKPA80202 Location: Reckling Peak
Field No.: 1036
Weight (gms): 544.5
Meteorite Type: L6 Chondrite

Physical Description: Carol Schwarz
Less than 1.5 mm thick, brown to black fusion crust covers the entire specimen except for one small area. The fusion crust is polygonally fractured. White evaporate deposit was visible in some of the fractures after the stone dried overnight in the nitrogen cabinet.

Interior material is gray with some oxidation halos. A number of parallel fractures are present. Some weathering has occurred along these cracks.

Dimensions: 12 x 5.5 x 5.5 cm.

Petrographic Description: Brian Mason
Chondrules are sparse and poorly defined, tending to merge with the granular groundmass, which consists of olivine and pyroxene with minor amounts of maskelynite, nickel-iron, and troilite. Well-preserved fusion crust is present in one edge of the section. A little limonitic staining is present around some of the nickel-iron grains. The section is cut by a dark glassy veinlet, maximum thickness 0.3 mm; clear isotropic material in this veinlet is tentatively identified as ringwoodite and majorite. Microprobe analyses show olivine (Fa_{24}) and orthopyroxene (Fs_{20}) of uniform composition; the maskelynite has CaO content (2.4%) appropriate to oligoclase composition, but has deficient and variable Na_2O content (2.4-5.0%). The meteorite is classified as an L6 chondrite.

This specimen is identical in texture, mineral compositions, and degree of weathering with RKPA78001, 78003, 79001, and 79002, which evidently are all pieces of a single meteorite.

Sample No.: RKPA80203 Location: Reckling Peak
Field No.: 1093
Weight (gms): 3.8
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Thin fusion crust remains on this small specimen. There is nothing unweathered remaining on this stone.

Dimensions: 2 x 1.5 x 0.5 cm

Petrographic Description: Brian Mason
Chondritic structure is barely perceptible, the sparse chondrules tending to merge into the granular aggregate of olivine and pyroxene, with minor plagioclase, nickel-iron, and troilite. Weathering is extensive, with numerous thin limonite veinlets throughout the section. The meteorite appears to have been considerably fractured and the minerals partly granulated. Microprobe analyses give the following compositions: olivine, Fa_{19}; orthopyroxene, Fs_{17}; plagioclase, An_{12}. The meteorite is classified as an H6 chondrite.

Stone is paired with RKPA80206, 80208, 80211, 80213, 80214, 80221, 80231, 80254, 80255, 80262, 80265, and 80266.

Sample No.: RKPA80204 Location: Reckling Peak
Field No.: 1078
Weight (gms): 15.4
Meteorite Type: Eucrite

Physical Description: Roberta Score
Black fusion crust covers one surface and appears as patches on two other surfaces.

Two texturally distinct lithologies are apparent in this achondrite. One texture (E end) is massive and fine grained. Rounded yellow clasts are obvious in this area. The second lithology (W end) has abundant small light and dark grains, making this area look coarser-grained. Thin (<1mm) black veins extend into both textures. Abundant vugs give the exterior a rough surface. Therefore it is difficult to determine the relationship between the two lithologies.

Chipping of the sample revealed a vein (~2-3 mm thick) of the coarse-grained lithology which extends partially into the massive lithology.

The chip taken to be made into thin section contains both textures.

Dimensions: 3 x 2 x 2 cm.

Petrographic Description: Brian Mason
The section shows clasts (up to 6 mm in maximum dimension) of ophitic intergrowths of pigeonite and plagioclase, separated by veins of coarser-grained pigeonite and plagioclase. The plagioclase laths in the clasts range up to 0.5 mm in length. The pigeonite and plagioclase grains in the veins average about 0.3 mm in maximum dimensions. Microprobe analyses show pigeonite with a limited range of composition ($Wo_4Fs_{57}En_{39}$ - $Wo_{13}Fs_{52}En_{35}$). Plagioclase ranges in composition from An_{85} to An_{94}, with a mean of An_{92}. Accessory ilmenite is present. The meteorite is classified as a eucrite (pyroxene-plagioclase achondrite).

Sample No.: RKPA80205 Location: Reckling Peak
Field No.: 1090
Weight (gms): 53.8
Meteorite Type: H3 Chondrite

Physical Description: Roberta Score
Exterior weathering did not obliterate the clastic nature of this unequilibrated ordinary chondrite. Numerous chondrules can be seen on the two fracture surfaces while dull brownish-black fusion crust covers the remainder of the meteorite.

Several irregular shaped, white clasts as large as 0.5 cm were revealed when this stone was chipped, as were numerous other inclusions in the medium to dark gray matrix. The 1 mm thick weathering rind showed that this meteorite is only moderately weathered.

Dimensions: 4 x 2.5 x 3 cm

Petrographic Description: Brian Mason
The section shows a closely packed mass of chondrules (0.2 - 2.4 mm diameter), chondrule fragments, and irregular crystalline aggregates, with interstitial nickel-iron and troilite and small amount of dark fine-grained matrix. A considerable variety of chondrules is present; many are granular to porphyritic olivine with transparent to turbid intergranular glass; others consist of granular polysynthetically twinned clinopyroxene with or without olivine, fine-grained pyroxene, or barred olivine. Minor brown limonitic staining is present throughout the section. Microprobe analyses show olivine ranging in composition from Fa_{17} to Fa_{20}, with a mean of Fa_{18}; the pyroxene is low-calcium (CaO 0.1-0.2%) clinobronzite, ranging in composition from Fs_5 to Fs_{13}, with a mean of Fs_8. This range of composition, together with the presence of glass, indicates type 3, and the composition of the olivine and considerable content of nickel-iron suggests H group; the meteorite is therefore tentatively classified as an H3 chondrite.

Sample No.: RKPA80206 Location: Reckling Peak
Field No.: 1082
Weight (gms): 46.6
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Patchy fusion crust is evident on all but one flat surface on an otherwise totally weathered specimen.

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 in texture, mineral compositions, and degree of fracturing and weathering, and is probably a piece of a single meteorite.

Sample No.: RKPA80207 Location: Reckling Peak
Field No.: 1087
Weight (gms): 17.7
Meteorite Type: L3 Chondrite

Physical Description: Roberta Score
Dull black fusion crust covers only one surface of this otherwise totally iridescently weathered specimen.

Dimensions: 3 x 2.5 x 1.5 cm

Petrographic Description: Brian Mason
Chondrules are abundant, ranging from 0.3 to 1.5 mm in diameter; a wide variety is present, the commonest being granular olivine and olivine-pyroxene, and fine-grained pyroxene. The granular chondrules have intergranular glass, sometimes pale brown and transparent, but commonly turbid and partly devitrified. Irregular granular clasts and chondrule fragments are also present. Most of the pyroxene is polysynthetically twinned. The matrix consists of fine-grained olivine and pyroxene, with minor subequal amounts of nickel-iron and troilite. Veinlets of limonite and brown limonitic staining pervade the section. Microprobe analyses show olivine ranging in composition from Fa_{15} to Fa_{29}, with a mean of Fa_{20}; pyroxene ranging from Fs_{6} to Fs_{28}, with a mean of Fs_{13}. This range of composition, together with the presence of glass, indicates type 3, and the low content of nickel-iron suggests L group; the meteorite is therefore tentatively classified as an L3 chondrite.

Sample No.: RKPA80208 Location: Reckling Peak
Field No.: 1075
Weight (gms): 10.2
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Meteorite is completely covered with a pitted dull black fusion crust. Several fractures penetrate the interoir.

A 2 mm thick weathering rind is present. The unweathered interior is light gray in color with oxidation halos speckled throughout. Darker gray colored inclusions are apparent.

Dimensions: 2.5 x 1.5 x 2.0 cm

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 in texture, mineral compositions, and degree of fracturing and weathering, and is probably a piece of a single meteorite.

Sample No.: RKPA80209 Location: Reckling Peak
Field No.: 1113
Weight (gms): 9.7
Meteorite Type: L5 Chondrite

Physical Description: Roberta Score
This flat sample is almost totally covered with a pitted black fusion crust. Several fractures penetrate the weathered interior which is reddish brown.

Dimensions: 2.5 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondrules are moderately abundant, 0.3-1.5 mm in diameter, and are set in a granular matrix of olivine and pyroxene, with minor subequal amounts of nickel-iron and troilite, and little plagioclase. Well preserved fusion crust, 0.6 mm thick, is present along one edge. Small areas of limonite, and limonitic staining, are present throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{25}; orthopyroxene, Fs_{21}; plagioclase, An_{11}. The meteorite is classified as an L5 chondrite.

Sample No.: RKPA80210 Location: Reckling Peak
Field No.: 1072
Weight (gms): 10.6
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Patchy black fusion crust covers all but one flat surface. This surface is heavily weathered.

The interior surfaces are mostly weathered with only a few patches of unweathered light gray material present.

Dimensions: 2.5 x 2 x 1.5 cm

Petrographic Description: Brian Mason
The section is moderately chondritic, the chondrules ranging up to 1.5 mm in diameter. They are set in a granular matrix consisting largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Fusion crust borders most of the section. Brown limonitic staining is extensive throughout. Microprobe analyses give the following compositions: olivine, Fa_{19}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80211 Location: Reckling Peak
Field No.: 1079
Weight (gms): 2.1
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
No fusion crust is present on this totally weathered fragment.

Dimensions: 1.5 x 1.0 x 0.5 cm

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 in texture, mineral compositions, and degree of fracturing and weathering, and is probably a piece of a single meteorite.

Sample No.: RKPA80213 Location: Reckling Peak
Field No.: 1116
Weight (gms): 19.1
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Fusion crust covers the entire meteorite. Several fractures penetrate the interior.

Only a small area of unweathered light-gray colored material with numerous dark veins was exposed by chipping this stone.

Dimensions: 2.5 x 2.0 x 1.5 cm

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 in texture, mineral compositions, and degree of fracturing and weathering, and is probably a piece of a single meteorite.

Sample No.: RKPA80214 Location: Reckling Peak
Field No.: 1092
Weight (gms): 4.9
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Thick, blistery, black fusion crust covers one surface of this otherwise weathered specimen.

Dimensions: 1.5 x 1.5 x 1 cm

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 in texture, mineral compositions, and degree of fracturing and weathering, and is probably a piece of a single meteorite.

Sample No.: RKPA80215 Location: Reckling Peak
Field No.: 1392
Weight (gms): 9.0
Meteorite Type: L6 Chondrite (Strongly Shocked)

Physical Description: Roberta Score
The interior and exterior of this meteorite are totally weathered.

Dimensions: 2 x 1.5 x 1 cm

Petrographic Description: Brian Mason
Chondritic structure is barely perceptible. The meteorite consists largely of comminuted grains of olivine and pyroxene traversed by numerous thin troilite veinlets. An area of brown isotropic material, 1.4 mm in maximum dimension, was noted. Weathering is extensive, with areas of red-brown limonite throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{24}; pyroxene, Fs_{20}; maskelynite, variable composition, CaO 1.2-1.6%, Na_2O 2.3-5.0%, K_2O 1.1-1.4%; accessory merrillite and apatite were identified. The meteorite is classified as a strongly shocked L6 chondrite.

Sample No.: RKPA80216 Location: Reckling Peak
Field No.: 1095
Weight (gms): 44.3
Meteorite Type: L4 Chondrite

Physical Description: Roberta Score
Pitted black fusion crust covers all but one surface of this meteorite. The fracture surface is full of weathered chondrules which can be easily plucked out.

The interior is light to medium gray with numerous darker gray rounded and irregular inclusions. Oxidation is scattered throughout.

Dimensions: 4.5 x 2 x 2 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, with a variety of chondrule types; irregular granular aggregates, possibly chondrule fragments, were also noted. The chondrules are set in a fine-grained groundmass consisting largely of olivine and pyroxene, with minor subequal amounts of nickel-iron and troilite. Some of the pyroxene, especially in the chondrules, is polysynthetically twinned. Brown limonitic staining is present around metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{23}; pyroxene, Fs_{20}. The meteorite is classified as an L4 chondrite.

Sample No.: RKPA80217 Location: Reckling Peak
Field No.: 1397
Weight (gms): 7.5
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Black fusion crust covers one surface of this flat specimen. The remaining surfaces are highly weathered. Chondrules are visible. The interior is totally weathered. This sample resembles RKPA80218.

Dimensions: 2 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, with chondrules 0.3-1.0 mm in diameter. They are set in a granular matrix of olivine and pyroxene, with minor amounts of nickel-iron, troilite, and a little plagioclase. Remnants of fusion crust are present on one edge of the section. Brown limonitic staining is pervasive throughout the section. Microprobe analyses give the following compositions: olivine, Fa_{18}; pyroxene, Fs_{15}; plagioclase, An_{12}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80218 Location: Reckling Peak
Field No.: 1302
Weight (gms): 6.7
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Brown to black fusion crust covers three surfaces of the stone. The other three are weathered with chondrules visible on the surface.

The interior exposed by chipping is totally weathered.

Dimensions: 2 x 2 x 1 cm

Petrographic Description: Brian Mason
This section resembles that of RKPA80217 in all respects, and these two specimens can be paired.

Sample No.: RKPA80219 Location: Reckling Peak
Field No.: 1305
Weight (gms): 21.5
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
This stone is totally covered with black fusion crust. A discontinuous weathering rind was exposed during chipping along with a light gray interior with lighter and darker colored inclusions.

Dimensions: 3 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is barely perceptible, the sparse chondrules merging with the granular matrix, which consists of olivine and pyroxene, with minor amounts of plagioclase, nickel-iron, and troilite. Remnants of fusion crust rim part of the section. A minor amount of limonitic staining is present around metal grains. Microprobe analyses give the following compositions: olivine, Fa_{25}; orthopyroxene, Fs_{21}; plagioclase, An_{11}; one grain of diopside was noted. The meteorite is an L6 chondrite.

Sample No.: RKPA80220 Location: Reckling Peak
Field No.: 1398
Weight (gms): 124.5
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Thin patchy fusion crust covers the entire meteorite. Several fractures penetrate the interior of the stone.

The interior is mostly weathered. Small areas of relatively fresh material are medium gray to yellow gray in color.

Dimensions: 5.4 x 4 x 3 cm

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, but is partly obscured by extensive fracturing. The chondrules are set in a matrix of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Brown limonitic staining is present throughout the section. Microprobe analyses give the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}; accessory merrillite was identified. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80221 Location: Reckling Peak
Field No.: 1303
Weight (gms): 51.9
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Fusion crust covers the exterior of an otherwise totally weathered stone.

Petrographic Description: Brian Mason
This specimen is an H6 chondrite essentially identical to RKPA80203.

Sample No.: RKPA80222 Location: Reckling Peak
Field No.: 1319
Weight (gms): 6.9
Meteorite Type: LL6 Chondrite

Physical Description: Roberta Score
Black fusion crust covers two surfaces and appears as patches on the two other surfaces. Several clasts are visible.

The interior is relatively fresh. A 2 mm troilite grain was exposed in chipping. Many dark inclusions are visible in the light matrix. This specimen is paired with RKPA80238 and RKPA80248.

Dimensions: 2.5 x 1.5 x 1 cm

Petrographic Description: Brian Mason
Chondritic structure is barely discernable, the meteorite consisting of a granular aggregate of olivine and pyroxene, with minor amounts of nickel-iron, troilite, and plagioclase; some of the nickel-iron is present as unusually large grains, up to 3 mm long. The meteorite has a brecciated structure typical of many LL chondrites. A small amount of limonitic staining is present around the metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{28}; orthopyroxene, Fs_{23}; plagioclase, An_{11}. The meteorite is classified as an LL6 chondrite.

Sample No.: RKPA80223 Location: Reckling Peak
Field No.: 1301
Weight (gms): 25.1
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Weathered fusion crust covers one surface of this meteorite. The remainder of the stone is highly weathered. No unweathered material was exposed when the sample was chipped.

Dimensions: 3.5 x 2.5 x 2 cm

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, but is obscured by extensive fracturing. The chondrules are set in a matrix of olivine and pyroxene, with minor amounts of nickel-iron and troilite, and a little plagioclase. Traces of fusion crust are present along one edge of the section. Red-brown limonite occurs as veinlets throughout the section. Microprobe analyses give the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}; plagioclase, An_{12}. The meteorite is classified as an H5 chondrite. It may be paired with RKPA80220.

Sample No.: RKPA80224 Location: Reckling Peak
Field No.: 1291
Weight (gms): 8.0
Meteorite Type: Unbrecciated Eucrite

Physical Description: Roberta Score
Thin, shiny black fusion crust covers five surfaces. One surface is a fracture surface. Areas devoid of fusion crust contain white crystals with dark inclusions.

When this achondrite was chipped, fine-grain material was apparent between the white crystals. Some oxidation is present.

Dimensions: ∿3.5 x 1.5 x 1.0 cm.

Petrographic Description: Brian Mason
The section shows an ophitic intergrowth of pigeonite and plagioclase, with accessory amounts of tridymite and opaque minerals; the average grain size of pyroxene and plagioclase is about 1 mm. Fusion crust is present on one edge of the section. The pyroxene and plagioclase crystals are somewhat granulated and show undulose extinction. A little limonitic staining is present in one area of the section. Microprobe analyses show pigeonite with an average composition of $Wo_{10}Fs_{54}En_{36}$; some grains show exsolution lamellae of augite with composition $Wo_{44}Fs_{26}En_{30}$. Plagioclase ranges in composition from An_{85} to An_{91}, with a mean of An_{89}. The opaque minerals are troilite and titanian chromite (TiO_2 13-15%). The meteorite is an unbrecciated eucrite (pyroxene-plagioclase achondrite).

Sample No.: RKPA80225 Location: Reckling Peak
Field No.: 1111
Weight (gms): 8.3
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
Fusion crust covers about half of this stone. The remainder is fracture surface which has been highly weathered. No unweathered material was exposed in chipping.

Dimensions: 2.5 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondrules are sparse and poorly defined, tending to merge with the granular matrix, which consists of olivine and pyroxene with minor amounts of maskelynite, nickel-iron, and troilite. The section is traversed by a thin (0.05 mm) dark glassy veinlet. Weathering is extensive, with brown limonitic staining throughout the section. Microprobe analyses show olivine (Fa_{25}) and orthopyroxene (Fs_{21}) of uniform composition; the maskelynite has CaO content (2.3%) appropriate to oligoclase composition, but has deficient and variable Na_2O content (3.7-5.4%). The meteorite is classified as an L6 chondrite.

Apart from a greater degree of weathering this specimen is identical with RKPA78001, 78003, 79001, 79002, and 80202, and probably should be paired with these specimens.

Sample No.: RKPA80226 Location: Reckling Peak
Field No.: 1394
Weight (gms): 160.3
Meteorite Type: Iron-Octahedrite

Physical Description: Roy S. Clarke, Jr.
This dark reddish brown specimen is slightly smaller than a hen's egg and is more irregularly shaped, 4.3 cm x 3.2 cm x 2.8 cm. The top surface is covered with pits 2 to 3 mm in length, and it is uniformly and gently convex. Distribution of pits seems to have been controlled in part by the internal Widmanstätten structure. This surface, as is also the case with the bottom surface, has been strongly affected by terrestrial weathering. The bottom surface is less uniform in shape and more convex. Part of this surface has a pattern of pits similar to that on the top. However, much of this bottom surface is dominated by a pattern of parallel ridges approximately 1 mm apart standing out in relief, and expression of the internal Widmanstätten structure of the material.

Tentative Classification: Roy S. Clarke, Jr.
A microetched median slice of approximately 6 cm^2 was examined. A heat- altered zone surrounds the slice and is as deep a 3.5 cm in one area. A well developed Widmanstätten is present with a kamacite band width in the 1.2 mm range. The length width ratio for these lamellae is about 7. Some Neumann bands are present in the kamacite, as are rhabdites, grain boundary schreibersites and subgrain boundaries. No epsilon structure or troilite were observed. Taenite bands occupy much of the kamacite grain boundaries, and taenite-kamacite and plessite fields are present. The plessite areas are mainly pearlitic, suggesting the possibility that the specimen is heat altered. It is an octahedrite, but additional information will be required for a specific classification.

Sample No.: RKPA80227 Location: Reckling Peak
Field No.: 1296
Weight (gms): 7.7
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Fusion crust covers two surfaces of this weathered stone. One fracture surface has slickenslides visible on it.

Chipping exposed an area of ~1 cm of medium to dark gray colored material and a large weathering rind.

Dimensions: 2 x 1.5 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, with chondrules up to 1.3 mm in diameter. They are set in a granular groundmass of olivine and pyroxene, with minor amounts of nickel-iron and troilite and a little plagioclase. Brown limonitic staining is present around the metal grains. Microprobe analyses give the following compositions: olivine, Fa_{19}; pyroxene, Fs_{16}; plagioclase, An_{12}; accessory merrillite was identified. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80228 Location: Reckling Peak
Field No.: 1307
Weight (gms): 11.1
Meteorite Type: L5 Chondrite

Physical Description: Roberta Score
This meteorite is covered with a weathered fusion crust. Several fractures penetrate the interior of the stone.

Weathering has disguised all of the interior features of the specimen.

Dimensions: 2 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondrules are prominent, ranging from 0.3 to 2.4 mm in diameter. They are set in a granular matrix of olivine and pyroxene, with minor subequal amounts of nickel-iron and troilite. Brown limonitic staining pervades the section. Microprobe analyses give the following compositions: olivine, Fa_{23}; pyroxene, Fs_{19}. The meteorite is classified as an L5 chondrite.

Sample No.: RKPA80229 Location: Reckling Peak
Field No.: 1395
Weight (gms): 14.1
Meteorite Type: Mesosiderite

Physical Description: Roberta Score
No fusion crust remains on this weathered meteorite. Many single crystals of pyroxene are scattered on the surface. The largest is 3 x 3 mm in dimension and fell out during chipping.

The interior is highly weathered.

Sample is paired with RKPA80246, RKPA80258, and RKPA80263.

Dimensions: 3 x 2 x 1.5 cm

Petrographic Description: Brian Mason
The section shows clasts of orthopyroxene, up to 2 mm across, in a nickel-iron matrix (the matrix extensively altered to limonite). Microprobe analyses show the pyroxene has essentially uniform composition, $Wo_2En_{74}Fs_{24}$. This specimen is a weathered fragment of RKPA79015.

Sample No.: RKPA80230 Location: Reckling Peak
Field No.: 1399
Weight (gms): 58.2
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Dull black fusion crust covers most of this meteorite.

Chipping revealed a 3 mm thick weathering rind. The interior material is light gray with many 1 mm sized darker inclusions. One end of the meteorite has an area of darker colored matrix which may be due to weathering. A large troilite grain (.5 cm in diameter) exists as a distinct chondrule.

Dimensions: 4 x 4 x 2 cm

Petrographic Description: Brian Mason
Chondrules are fairly abundant, ranging up to 0.9 mm across. They are set in a granular groundmass consisting largely of olivine and pyroxene, with minor nickel-iron and troilite and a little fine-grained plagioclase. Brown limonitic staining surrounds the nickel-iron grains. Traces of fusion crust are present along one edge. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}; plagioclase, An_{12}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80231 Location: Reckling Peak
Field No.: 1267
Weight (gms): 238.1
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Two small patches of dull black fusion crust remain on this weathered and fractured stone. No unweathered material was exposed when the sample was chipped.

Dimensions: 7 x 5 x 3 cm.

Petrographic Description: Brian Mason
Chondritic structure is poorly defined, the chondrules tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron, plagioclase, and troilite. Weathering is extensive, with numerous thin limonite veinlets throughout the section. The meteorite appears to have been considerably fractured and the minerals partly granulated. Microprobe analyses give the following mineral compositions: olivine, Fa_{18}; orthopyroxene, Fs_{16}; plagioclase, An_{12}. The meteorite is classified as an H6 chondrite.

Sample No.: RKPA80232 Location: Reckling Peak
Field No.: 1293
Weight (gms): 80.1
Meteorite Type: H4 Chondrite

Physical Description: Roberta Score
Brownish-black fusion crust covers most of the specimen. Chipping exposed a discontinuous weathering rind, 1-3 mm thick. The unweathered interior material is medium to dark gray in color, with many light and dark colored irregular and rounded inclusions. Oxidation halos are uniformily scattered throughout the interior.

Dimensions: 4.5 x 3.0 x 2.5 cm

Petrographic Descriptions: Brian Mason
The section is made up largely of an aggregate of chondrules, ranging up to 1.2 mm across. They are set in a granular groundmass of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Some of the pyroxene is polysynthetically twinned clinobronzite. Brown limonitic staining is extensive, concentrated around the metal grains. Fusion crust is present along one edge. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H4 chondrite.

Sample No.: RKPA80233 Location: Reckling Peak
Field No.: 1096
Weight (gms): 413.5
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Patches of fusion crust cover all but one planar, fracture surface. This surface contains numerous chondrules which can easily be plucked out. A small area of unweathered interior material contains dark inclusions.

Dimensions: 8.5 x 6.5 x 5 cm.

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, with chondrules ranging up to 2.4 mm in diameter. The chondrules are set in a granular groundmass which consists largely of olivine and pyroxene with minor amounts of nickel-iron, troilite, and plagioclase. There is a considerable amount of limonitic staining throughout the section, concentrated around the metal grains. Microprobe analyses gave the following mineral compositions: olivine, Fa_{18}; orthopyroxene, Fs_{16}; plagioclase, An_{11}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80234 Location: Reckling Peak
Field No.: 1119
Weight (gms): 136.2
Meteorite Type: LL5 Chondrite

Physical Description: Roberta Score
Fusion crust covers only one flat surface. While the other surfaces have weathered to a reddish-brown color, several rounded and irregular yellow colored inclusions are obvious on the exterior.

Chipping revealed a moderately (heavy in some areas) weathered interior. The matrix material is medium to dark gray and contains numerous chondrules.

Dimensions: 6 x 5 x 2 cm

Petrographic Description: Brian Mason
Chondritic structure is barely discernable, the sparse chondrules being largely obscured by extensive brecciation throughout the section. The section shows an aggregate of granular olivine and pyroxene, with a little troilite and nickel-iron. Brown limonitic staining pervades the section. Microprobe analyses gave the following compositions: olivine, Fa_{26}; pyroxene, Fs_{22}. The meteorite is classified as an LL5 chondrite.

Sample No.: RKPA80235 Location: Reckling Peak
Field No.: 1261
Weight (gms): 261.2
Meteorite Type: LL6 Chondrite

Physical Description: Roberta Score
Several patches of black fusion crust are present. Most of this rough surfaced meteorite is yellowish-brown in color. Numerous clasts are obvious. The interior of this stone is medium gray in color and is relatively unweathered.

Dimensions: 9 x 6.5 x 4.5 cm.

Petrographic Description: Brian Mason
The section is finely granular (average grain size about 0.1 mm), with only traces of chondritic structure. The meteorite consists largely of olivine and pyroxene, with minor amounts of plagioclase; nickel-iron and troilite are unusually sparse, less than 5%. Limonitic staining is absent, the meteorite appearing to be completely unweathered (a recent fall ?). Microprobe analyses gave the following mineral compositions: olivine, Fa_{30}; orthopyroxene, Fs_{24}; plagioclase, An_{10}. The meteorite is classified as an LL6 chondrite.

Sample No.: RKPA80236 Location: Reckling Peak
Field No.: 1298
Weight (gms): 15.6
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Entire sample is covered with fusion crust. Most of the interior is heavily weathered. Only a small area of moderately weathered was exposed when the stone was chipped. This material is light gray with darker gray inclusions.

Dimensions: 2.5 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondrules are fairly abundant, ranging up to 1.5 mm in diameter, but they tend to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Brown limonitic staining is present throughout the section. Fusion crust rims one edge. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80237 Location: Reckling Peak
Field No.: 1309
Weight (gms): 22.2
Meteorite Type: H4 Chondrite

Physical Description: Roberta Score
Two surfaces of this meteorite are covered with blistery brown and black fusion crust. The other surfaces contain chondrules.

No unweathered material was exposed when the stone was chipped.

Dimensions: 3 x 2.5 x 2 cm

Petrographic Description: Brian Mason
Chondrules are abundant and well developed, ranging up to 1.5 mm across; some irregular granular aggregates are also present. The matrix consists of fine-grained olivine and pyroxene, with minor amounts of nickel-iron and troilite. Some of the pyroxene is polysynthetically twinned clinobronzite. Brown limonitic staining is present throughout the section. Remnants of fusion crust rim part of the section. Microprobe analyses give the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H4 chondrite.

Sample No.: RKPA80238 Location: Reckling Peak
Field No.: 1262
Weight (gms): 18.4
Meteorite Type: LL6 Chondrite

Physical Description: Roberta Score
Black fusion crust covers almost the entire stone except for the corners where the fusion has been spalled off. These areas are lightly to moderately weathered. One troilite grain (5 mm long) is obvious on the exterior surface.

The interior is white in color with many angular dark gray to black colored clasts as large as 3 mm in dimension. The troilite grain mentioned earlier extends 3 mm into the interior of the meteorite, part of which is contained in the chip that was made into thin section.

Sample is paired with RKPA80222 and RKPA80248.

Dimensions: 3 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is barely discernable, the sparse chondrules tending to merge with the granular groundmass or are obscured by extensive brecciation throughout the section. The specimen consists largely of olivine and pyroxene, with minor plagioclase and troilite, and a little nickel-iron. A little brown limonitic staining is present around the metal grains. Fusion crust is present along one edge. Microprobe analyses gave the following compositions: olivine, Fa_{28}; pyroxene, Fs_{23}; plagioclase, An_{11}. The meteorite is classified as an LL6 chondrite.

Sample No.: RKPA80239 Location: Reckling Peak
Field No.: 1098
Weight (gms): 5.6
Meteorite Type: Ureilite

Physical Description: Roberta Score
Thin patchy fusion crust appears on all surfaces of this achondrite. Areas devoid of fusion crust are crystalline, reddish-brown in color and rough in texture.

The interior is black to reddish-brown in color and crystalline (?). Sample has weathered differently than other samples in the Antarctic collection.

Dimensions: 2 x 1.5 x 0.5 cm

Petrographic Description: Brian Mason
The section shows an aggregate of anhedral grains (0.3-1.5 mm across) of olivine with minor amounts of pyroxene. The grains are rimmed with black carbonaceous material. Trace amounts of troilite and nickel-iron are present, the latter largely altered to translucent brown limonite concentrated along grain boundaries. Microprobe analyses show olivine of uniform composition (Fa_{16}) with notably high CaO content (0.3-0.4%); the pyroxene is a pigeonite of composition $Wo_5Fs_{15}En_{81}$. This meteorite is a ureilite; it appears to be relatively lightly shocked compared to most ureilites.

Sample No.: RKPA80240 Location: Reckling Peak
Field No.: 1260
Weight (gms): 61.4
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Dull fusion crust appears on one surface of this weathered meteorite. Slickensides are obvious on the fusion crusted surface. No unweathered material was exposed by chipping this stone.

Dimensions: 4 x 3.5 x 2 cm

Petrographic Description: Brian Mason
Chondrules are fairly abundant, up to 0.9 mm in diameter, but they tend to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Brown limonitic staining pervades the section. Remnants of fusion crust are present along one edge. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80241 Location: Reckling Peak
Field No.: 1074
Weight (gms): 0.6
Meteorite Type: C3V Chondrite

Physical Description: Roberta Score
A small amount of fusion crust exists on this tiny specimen.

Dimensions: 1.5 x .5 x .5 cm

Petrographic Description: Brian Mason
The section shows a close-packed aggregate of chondrules (up to 2.5 mm across) and irregular granular aggregates, set in a small amount of black (probably carbonaceous) matrix. A minor amount of nickel-iron is present, in several forms: as small grains dispersed through some chondrules, concentrated around the margins of some chondrules, and as rare globules up to 0.8 mm across in the matrix. The silicate material consists largely of olivine and polysynthetically twinned clinopyroxene. Well preserved fusion crust, up to 1.2 mm, rims part of the section. Weathering is extensive, with brown limonitic staining pervasive throughout the section. Microprobe analyses show olivine and pyroxene with variable composition; for 30 olivine analyses the Fa range is 0.7-5.5 (except for one of Fa_{36}), and the mean is Fa_3; for 15 pyroxene analyses the range is Wo 0.3-1.5, En 90-98, Fs 1-8, with a mean of $Wo_{0.7}En_{95}Fs_4$. The meteorite is tentatively classified as a C3V chondrite.

Sample No.: RKPA80242 Location: Reckling Peak
Field No.: 1084
Weight (gms): 7.3
Meteorite Type: L4 Chondrite

Physical Description: Roberta Score
The specimen is entirely covered by weathered fusion crust. Several fractures penetrate the interior of the stone.

Chipping exposed a mostly weathered interior. Less weathered areas are gray with darker inclusions.

Dimensions: 2 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, with a variety of chondrule types; irregular granular aggregates, possibly chondrule fragments, were also noted. The chondrules are set in a fine-grained matrix consisting largely of olivine and pyroxene, with minor subequal amounts of nickel-iron and troilite. Some of the pyroxene in the chondrules is polysynthetically twinned clinobronzite. The section is partly rimmed by remnants of fusion crust. Brown limonitic staining pervades the section. Microprobe analyses gave the following compositions: olivine, Fa_{22}; pyroxene, Fs_{19}. The meteorite is classified as an L4 chondrite. It closely resembles RKPA80216, with which it is possibly paired.

Sample No.: RKPA80243 Location: Reckling Peak
Field No.: 1077
Weight (gms): 3.4
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Fusion crust covers all but one surface of this specimen. A yellow inclusion is visible on the fracture surface. Chipping revealed a totally weathered interior.

Dimensions: 2.5 x 1 x 1 cm

Petrographic Description: Brian Mason
Chondritic structure is moderately well developed, but the margins of the chondrules tend to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Well preserved fusion crust, 0.3 mm thick, is present along one edge. Brown limonitic staining and areas of red-brown limonite occur throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80244 Location: Reckling Peak
Field No.: 1081
Weight (gms): 14.2
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Fusion crust covers 50% of this stone. Slickenslides are present on part of one fracture surface. The interior is completely weathered.

Petrographic Description: Brian Mason
Chondrules are fairly abundant, ranging up to 1.5 mm in diameter, but their margins are diffuse, tending to merge with the granular groundmass, which consists of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Brown limonitic staining pervades the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}; one grain of merrillite was analyzed. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80245 Location: Reckling Peak
Field No.: 1269
Weight (gms): 36.7
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Black fusion crust covers about 80% of this sample. The rest of the stone is a weathered reddish brown. The interior is mostly weathered with a small area of fresh material. This material is light gray with darker inclusions.

Dimensions: 3 x 2.5 x 2 cm

Petrographic Description: Brian Mason
Chondrules are abundant and well developed; most are about 1 mm in diameter, but an exceptionally large one, 3.6 mm across, is exposed at the edge of the section. The chondrules are set in a granular groundmass of olivine and pyroxene, with minor amounts of troilite and nickel-iron. Fusion crust is present along one edge. Brown limonitic staining pervades the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80246 Location: Reckling Peak
Field No.: 1308
Weight (gms): 5.8
Meteorite Type: Mesosiderite

Physical Description: Roberta Score
The heavily weathered exterior surfaces of this meteorite contains several large pyroxene crystals, as large as 5 mm in the longest dimension. Most of the crystals have three cleavage faces showing. Many of these clasts can easily be plucked out.

Chipping this thin specimen did not expose any unweathered material.

This specimen is paired with RKPA80229, RKPA80258, and RKPA80263.

Dimensions: 3 x 1.5 x 1 cm

Petrographic Description: Brian Mason
The section consists largely of clasts of orthopyroxene, up to 4 mm across, seamed with veinlets of nickel-iron which has been extensively altered to red-brown limonite. Microprobe analyses show the pyroxene has essentially uniform composition, $Wo_2En_{74}Fs_{24}$. The specimen is a weathered fragment of RKPA79015.

Sample No.: RKPA80247 Location: Reckling Peak
Field No.: 1070
Weight (gms): 1.1
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Brown and black fusion crust covers all but one surface of this specimen. The remaining surface has weathered to a red-brown color.

Petrographic Description: Brian Mason
Chondrules are fairly abundant, but their borders are diffuse, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite, and a little fine-grained plagioclase. Remnants of fusion crust are present. Brown limonitic staining pervades the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80248 Location: Reckling Peak
Field No.: 1263
Weight (gms): 11.3
Meteorite Type: LL6 Chondrite

Physical Description: Roberta Score
Black fusion crust totally covers two surfaces and appears as patches on three. Areas not covered by fusion crust are light buff in color and containd clasts.

The interior is white with angular dark blue-gray clasts up to 4 mm in diameter. Some oxidation is present.

This specimen is paired with RKPA80222 and RKPA80238.

Dimensions: 2.5 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondritic structure is barely perceptible, the sparse chondrules merging with the granular olivine and pyroxene that make up most of the section, with minor amounts of plagioclase and troilite, and a little nickel-iron. The section shows some appearance of a brecciated structure. A small amount of brown limonitic staining is present around the nickel-iron grains. Microprobe analyses gave the following compositions: olivine, Fa_{27}; pyroxene, Fs_{23}, plagioclase, An_{11}. The meteorite is classified as an LL6 chondrite.

Sample No.: RKPA80249 Location: Reckling Peak
Field No.: 1118
Weight (gms): 9.7
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Dull black fusion crust is present on about 50% of this stone. On the one fracture surface chondrules are visible in the weathered matrix.

A small area of weathered material was exposed when this stone was chipped. The material is light gray with many small darker gray inclusions.

Dimensions: 2.5 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, with chondrules ranging up to 1.5 mm in diameter. The matrix consists largely of granular olivine and pyroxene, with minor amounts of nickel-iron, troilite, and fine-grained plagioclase. Fusion crust is present along one edge. Brown limonitic staining is pervasive throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{17}; pyroxene, Fs_{15}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80250 Location: Reckling Peak
Field No.: 1083
Weight (gms): 3.9
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Brown and black fusion crust covers half of this specimen. The other half is a weathered brown color with a few gray chondrules that can be plucked out.

Most of the interior is weathered except for a small area of medium gray matrix with light gray inclusions.

This specimen looks similar to RKPA80251.

Dimensions: 2.5 x 1 x 1 cm

Petrographic Description: Brian Mason
Chondritic structure is well developed, but the chondrules tend to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron, troilite, and fine-grained plagioclase. Remnants of fusion crust rim most of the section. Brown limonitic staining is present around metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{17}; pyroxene, Fs_{15}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80251 Location: Reckling Peak
Field No.: 1117
Weight (gms): 29.1
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Black fusion crust covers about 50% of this meteorite. Areas devoid of fusion crust are dark brown with chondrules that may be plucked out.

More than half of the interior is totally weathered. Only the center is gray with <1 mm light and dark inclusions.

This specimen looks similar to RKPA80250.

Dimensions: 3 x 2.5 x 1.5 cm

Petrographic Description: Brian Mason
Physical examination indicated that this specimen was similar to RKPA80250, and this is confirmed by microscopic examination. RKPA80251 is an H5 chondrite identical in texture, degree of weathering, and mineral compositions with RKPA80250, and is tentatively paired with that meteorite.

Sample No.: RKPA80252 Location: Reckling Peak
Field No.: 1080
Weight (gms): 11.2
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
Black fusion crust covers about half of this specimen. The clastic nature of this meteorite is apparent from the areas not covered by fusion crust.

The interior is white with small dark inclusions. Oxidation is not significant.

Dimensions: 2 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondrules are sparse and poorly developed, tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of plagioclase, troilite, and nickel-iron. A minor degree of weathering is indicated by brown limonitic staining around the metal grains. Microprobe analyses gave the following compositions: olivine, Fa_{24}; pyroxene, Fs_{20}; plagioclase, An_{11}. The meteorite is classified as an L6 chondrite.

Sample No.: RKPA80253 Location: Reckling Peak
Field No.: 1297
Weight (gms): 4.6
Meteorite Type: LL5 Chondrite

Physical Description: Roberta Score
Except for two small areas this flat specimen is totally covered with black fusion crust that is blistery in some areas.

The interior is a white-gray color and contains many dark angular inclusions. Oxidation is light.

Dimensions: 2 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondrules are fairly abundant, and are relatively large, ranging up to 3 mm in diameter. The specimen shows a brecciated structure, and many of the chondrules are fractured and deformed. Fusion crust rims much of the section. Only a little nickel-iron is present. Microprobe analyses gave the following compositions: olivine, Fa_{27}; pyroxene, Fs_{22}, with a few more Mg-rich grains; plagioclase, An_{10}. The meteorite may be classified as an LL5 chondrite, but different areas of the brecciated structure show features of higher and lower type.

Sample No.: RKPA80254 Location: Reckling Peak
Field No.: 1086
Weight (gms): 68.5
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Patchy black fusion crust covers this reddish-brown meteorite. Many fractures penetrate the interior.

No unweathered material was exposed by chipping.

Dimensions: 5 x 3 x 2.5 cm

Petrographic Description: Brian Mason
This is an H6 chondrite, identical in all respects with RKPA80255 and RKPA80203 and the other specimens found with it.

Sample No.: RKPA80255 Location: Reckling Peak
Field No.: 1076
Weight (gms): 6.7
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Patchy black fusion crust appears on all surfaces of this reddish-brown specimen. No fresh material was exposed by chipping.

Dimensions: 1.5 x 1.5 x 1 cm

Petrographic Description: Brian Mason
This is an H6 chondrite, identical in all respects with RKPA80254 and RKPA80203 and the other specimens found with it.

Sample No.: RKPA80256 Location: Reckling Peak
Field No.: 1290
Weight (gms): 153.2
Meteorite Type: L3 Chondrite

Physical Description: Roberta Score
This meteorite is almost totally covered with a brownish-black fusion crust. Areas along the edges where the fusion crust has been plucked away reveal the clastic nature of this meteorite.

Chipping the sample confirmed that this meteorite is an unequilibrated chondrite with chondrules as large as .5 cm. In addition to the high concentration of chondrules, several white and gray clasts as much as .5 cm. in the longest dimension are present. Weathering is moderate.

Dimensions: 7 x 5.5 x 3 cm.

Petrographic Description: Brian Mason
The thin section shows a closely packed mass of chondrules (0.3-1.8 mm diameter) and irregular crystalline aggregates. Some of the chondrules have prominent dark rims. The sparse matrix is dark and fine-grained, with a small amount of coarser nickel-iron and troilite scattered throughout. A notable variety of chondrules is present; many are granular or porphyritic olivine and olivine-pyroxene with transparent to turbid interstitial glass. The pyroxene is polysynthetically twinned clinobronzite. There is a little limonitic staining in association with metal grains. Microprobe analyses show olivine ranging in composition from Fa_{20} to Fa_{25}, with a mean of Fa_{22}; the pyroxene is low-calcium (CaO = 0.1-0.8%), with a composition range from Fs_{20} to Fs_{26} and a mean of Fs_{18}. This range of composition, together with presence of glass and twinned clinobronzite, indicates Type 3. The small amount of nickel-iron suggests L group. The meteorite is therefore tentatively classified as an L3 chondrite.

Sample No.: RKPA80257 Location: Reckling Peak
Field No.: 1085
Weight (gms): 8.5
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Black fusion crust covers all but one surface which is reddish brown.

The interior contains a small area that is medium gray in color surrounded by a 5 mm wide continuous weathering rind.

Dimensions: 2 x 1.5 x 1 cm

Petrographic Description: Brian Mason
Chondrules are numerous but not prominent, their margins tending to merge with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. Well-preserved fusion crust, up to 0.9 mm thick, rims much of the section. Brown limonitic staining pervades the section. Microprobe analyses gave the following compositions: olivine, Fa_{17}; pyroxene, Fs_{15}; one grain of diopside, $Wo_{45}En_{50}Fs_{5}$, was analyzed. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80258 Location: Reckling Peak
Field No.: 1071
Weight (gms): 4.3
Meteorite Type: Mesosiderite

Physical Description: Roberta Score
Fusion crust covers one surface of this meteorite. Visible on it are two large clasts, probably pyroxene, measuring 1.0 x 0.5 cm and 0.5 x 0.4 cm in dimension. both show cleavage faces. The specimen is highly weathered, although metal was detected in chipping.

Sample is paired with RKPA80229, RKPA80246, and RKPA80263.

Dimensions: 1.5 x 1.5 x 1 cm

Petrographic Description: Brian Mason
The section shows angular clasts of orthopyroxene up to 2 mm across in a nickel-iron matrix, closely resembling RKPA79015, RKPA80229, and RKPA80246. A thick rind of red-brown limonite rims part of the section. Microprobe analyses show some variability in pyroxene composition: Wo 2.3-2.9, En 77-80, Fs 17-21, in contrast to RKPA79015, RKPA80229, and RKPA80246, in which the pyroxene has essentially uniform composition of $Wo_2En_{74}Fs_{24}$. Rare grains of calcium-rich plagioclase of somewhate variable composition (An_{86}-An_{94}) were noted.

The unique nature of these specimens and their otherwise close similarity indicates that they are probably pieces of a single meteorite, a metal-rich mesosiderite.

Sample No.: RKPA80259 Location: Reckling Peak
Field No.: 1292
Weight (gms): 20.2
Meteorite Type: E5 Chondrite

Physical Description: Roberta Score
Thin iridescent fusion crust covers most of this stone. The matrix is dark colored and weathered. A small amount of white evaporite deposit is present in the interior of the sample.

Dimensions: 2.5 x 1.5 x 1.5 cm

Petrographic Description: Brian Mason
Chondrules are area and barely discernable, the meteorite consisting largely of fine-grained enstatite (mean grain size approximately 0.05 mm), with some nickel-iron and troilite. Weathering is very extensive, with much red-brown limonite throughout the section. The silicate material is blackened by the presence of finely dispersed troilite, probably the result of an episode of severe shock. Microprobe analyses showed that the enstatite is almost pure $MgSiO_3$; with minor amounts of Al_2O_3 (0.1-0.3%), FeO (0.1-0.5%), and CaO (0.5-0.8%). The meteorite is classified as an E5 chondrite.

Sample No.: RKPA80260 Location: Reckling Peak
Field No.: 1089
Weight (gms): 7.5
Meteorite Type: H5 Chondrite

Physical Description: Roberta Score
Four surfaces of this specimen are covered with patchy fusion crust. The rest of the stone has weathered to a deep reddish-brown color with some yellow clasts.

Dimensions: 2 x 2 x 1 cm

Petrographic Description: Brian Mason
Chondrules are moderately abundant, but their margins are blurred by integration with the granular groundmass, which consists largely of olivine and pyroxene, with minor amounts of nickel-iron and troilite. The section is partly rimmed by remnants of fusion crust. Brown limonitic staining extends throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{18}; pyroxene, Fs_{16}. The meteorite is classified as an H5 chondrite.

Sample No.: RKPA80261 Location: Reckling Peak
Field No.: 1299
Weight (gms): 61.6
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
This specimen is nearly complete except for a small rounded area, and is covered with black and brown fusion crust. The interior has a thin continuous weathering rind with much of the interior free of oxidation. Small light and dark inclusions are visible in the light gray matrix. Several veins <1 mm wide are present and have been preferentially weathered.

Dimensions: 4.5 x 3.5 x 2 cm

Petrographic Description: Brian Mason
This specimen is a brecciated L6 chondrite, similar in all respects to RKPA78001 and many other Reckling Peak L6 chondrites, with which it may be paired. The section has a dark veinlet, up to 0.15 mm wide, possibly containing ringwoodite and majorite.

Sample No.: RKPA80262 Location: Reckling Peak
Field No.: 1295
Weight (gms) 32.1
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
This stone is completely covered with fusion crust. Chipping revealed a totally weathered interior.

Dimensions: 3.5 x 2.5 x 2 cm

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 and several other H6 chondrites in the 1980 collection and are probably pieces of a single meteorite.

Sample No.: RKPA80263 Location: Reckling Peak
Field No.: 1390
Weight (gms): 16.7
Meteorite Type: Mesosiderite

Physical Description: Roberta Score
The specimen has an iridescent sheen. A few regmaglypts are present. Several greenish colored clasts as large as 5 mm in length show cleavage.

Metal is obvious but extremely weathered.

Dimensions: 3.5 x 2.5 x 1 cm

Petrographic Description: Brian Mason
This specimen is a mesosiderite and is paired with RKPA79015, RKPA80229, RKPA80246, RKPA80258, and RKPA80263.

Sample No.: RKPA80264 Location: Reckling Peak
Field No.: 1393
Weight (gms): 23.9
Meteorite Type: L6 Chondrite

Physical Description: Roberta Score
Black fusion crust covers five surfaces and appears in patches on the one fracture surface. The fracture surface is light in color with a few oxidation spots and many gray and cream colored clasts as large as 3 mm.

The interior is white with some oxidation present.

Dimentions: 4 x 2.5 x 2 cm

Petrographic Description: Brian Mason
This specimen is a brecciated L6 chondrite, similar in all respects to RKPA78001 and many other Reckling Peak L6 chondrites, with which it may be paired.

Sample No.: RKPA80265 Location: Reckling Peak
Field No.: 1073
Weight (gms): 7.8
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
This specimen consists of two pieces which do not fit together. Both are rounded and have fusion crust on all surfaces. The interior is totally weathered.

Dimensions: 2.5 x 2 x 1 cm.

Petrographic Description: Brian Mason
This specimen is essentially identical to RKPA80203 and several other H6 chondrites in the 1980 collection and are probably pieces of a single meteorite.

Sample No.: RKPA80266 Location: Reckling Peak
Field No.: 1304
Weight (gms): 9.8
Meteorite Type: H6 Chondrite

Physical Description: Roberta Score
Pitted fusion crust covers one surface while smooth fusion crust covers another. The rest of the stone has weathered to a deep reddish brown.

The interior is mostly weathered, though a few inclusions are obvious in the less weathered areas.

Dimensions: 3 x 2 x 1 cm

Petrographic Description: Brian Mason
This specimen is an H6 chondrite identical in all respects to RKPA80203.

Sample No.: RKPA80267 Location: Reckling Peak
Field No.: 1091
Weight (gms): 24.2
Meteorite Type: H4 Chondrite

Physical Description: Roberta Score
Dull black fusion crust covers two surfaces. The other surfaces are iridescent reddish brown.

No unweathered material was exposed when the sample was chipped.

Dimensions: 4 x 2 x 1.5 cm

Petrographic Description: Brian Mason
Chondrules are abundant and well developed, up to 1.2 mm across; a variety of types is present, the commonest being granular olivine and olivine-pyroxene, porphyritic olivine, and fine-grained pyroxene. The pyroxene is mostly polysynthetically twinned clinobronzite. The groundmass is fine-grained olivine and pyroxene with some nickel-iron and troilite. The specimen is somewhat brecciated, and a metal veinlet, up to 0.6 mm thick, crosses the section. Weathering is extensive, with red-brown limonite veinlets throughout the section. Microprobe analyses gave the following compositions: olivine, Fa_{19}; pyroxene, Fs_{16}. The meteorite is classified as a H4 chondrite.

Sample No.: RKPA80268 Location: Reckling Peak
Field No.: 1268
Weight (gms): 3.4
Meteorite Type: L5 Chondrite

Physical Description: Roberta Score
Pitted fusion crust occurs on 75% of this stone. Areas devoid of fusion crust that are not oxidized are gray in color. Many chondrules are visible including some that may be easily plucked out.

The interior is mostly orange-brown with some gray areas.

Dimensions: 2 x 1.5 x 1 cm

Petrographic Description: Brian Mason
Chondrules are moderately abundant, but tend to merge with the granular groundmass, which consists of olivine and pyroxene with minor amounts of nickel-iron and troilite. Remnants of fusion crust are present along one edge. The nickel-iron grains are surrounded by brown limonitic staining. Microprobe analyses gave the following compositions: olivine, Fa_{24}; pyroxene, Fs_{20}. The meteorite is classified as an L5 chondrite.

Sample No.: OTTA80301 Location: Outpost Nunatak
Field No.: 1088
Weight (gms): 35.5
Meteorite Type: H3 Chondrite

Physical Description: Roberta Score
90% of this specimen is covered with brown and black fusion crust which is pitted in some areas. One corner has been broken off to reveal a vein of weathered material from 1 to 5 mm wide, which is a much darker gray than the less weathered matrix.

The interior is marked by abundant chondrules and irregular shaped inclusions.

Dimensions: 3.5 x 3 x 2 cm.

Petrographic Description: Brian Mason
The section shows a close-packed aggregate of chondrules and some irregular granular enclaves; the matrix consists of fine-grained silicates with a moderate amount of nickel-iron and a lesser amount of troilite. Chondrules range up to 1.1 mm across, and show a variety of types, the commonest being granular olivine and olivine-pyroxene (polysynthetically twinned clinobronzite), porphyritic olivine, and fine-grained pyroxene. Some intergranular glass in the chondrules is clear and transparent, but much of it is turbid and partly devitrified. Minor brown limonitic staining is present around nickel-iron grains. Microprobe analyses show olivine and pyroxene with variable composition: olivine, Fa_{17-19}, average Fa_{18}; pyroxene, Fs_{4-19}, average Fs_{10}. The meteorite is tentatively classified as an H3 chondrite.

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