L553

CLASSIFICATION OF ORDINARY CHONDRITES

Meteorite BLUFF (Q) M52.5

PETROGRAPHY

CHONDRULE OUTLINES Very Distinct Discernible ↔ Obscure Non-Existent

PRESENCE OF CHONDRULE GLASS Yes (No) – REXL

PLAGIOCLASE GRAIN SIZE _____ µm (For highly metamorphosed Meteorites)

STRIATED PYROXENE Everywhere Abundant (Rare) None

MATRIX Opaque (Recrystallized) (Caution: Beware of Weathering)

CHONDRULE TYPES (All Present) Some Missing _____

WEATHERING Pigments Patches (Veins) LESS WEATHERED ⇒ INTERMED

METAL (Fresh) Weathering Rims Islands Replaced

TROILITE (Fresh) Weathering Rims Islands Replaced

OPAQUE GRAIN SIZE Metal _____ µm Troilite _____ µm

BRECCIATION Obvious Not Obvious

UNUSUAL FEATURES _____

SHOCK CLASSIFICATION

OLIVINE Sharp (Undulatory) (Planar Fractures) Mosaicism Ringwoodite

PLAGIOCLASE No effects Undulatory Extinction Maskelynite

SHOCK VEINS (Yes) No LOCAL MELT POCKETS

MODES

4.9 (4.6) Metal 4.7 (4.6) Troilite 0.2 (4.3) Weathering Products (all in vol.%)

614 No. of Points

WT %

MICROPROBE ANALYSES

Olivine _____ Fa Avg. _____ σ _____ Number of analyses

Low-Ca Pyroxene _____ Fs Avg. & σ _____ Wo Avg. & σ _____ N

High-Ca Pyroxene (optional) _____ Fs _____ Wo _____ N

614 TOTAL

554

SiL

4.9

30

Fe, Ni

4.7

29

FeS

CHROMITE

11

0.2

1

FeOOH

1

297.66 SiL

37.24 Fe, Ni 10.4

21.62 FeS 6.0

0.86 FeOOH 0.2

11	13	6		18	34	6
21	4	23		19		
10	4	5		3	3	
22	13	9		23	3	
19	23	19		11	3	