

CLASSIFICATION OF ORDINARY CHONDRITES

Meteorite BLUFF #2 46 TM-1

PETROGRAPHY

CHONDRULE OUTLINES Very Distinct Discernible Obscure Non-Existent

PRESENCE OF CHONDRULE GLASS Yes No

PLAGIOCLASE GRAIN SIZE SMALL μm (For highly metamorphosed Meteorites)

STRIATED PYROXENE Everywhere Abundant Rare TO None SHOCK EFFECTS COMPLICATE ID

MATRIX Opaque Recrystallized (Caution: Beware of Weathering)

CHONDRULE TYPES All Present Some Missing _____

WEATHERING Pigments Patches Veins

METAL Fresh Weathering Rims Islands Replaced

TROILITE Fresh Weathering Rims Islands Replaced ALTERED TO PENTLANDITE

OPAQUE GRAIN SIZE Metal _____ μm Troilite _____ μm

BRECCIATION Obvious Not Obvious

UNUSUAL FEATURES _____

SHOCK CLASSIFICATION

OLIVINE Sharp Undulatory Planar Fractures Mosaicism Ringwoodite , NONE OBSERVED

PLAGIOCLASE No effects Undulatory Extinction Maskelynite

SHOCK VEINS Yes No FINELY-DISPERSED Fe, Ni & FeS
Fe₂Ni-FeS FILLING CRACKS IN SILICATES

MODES

_____ Metal _____ Troilite _____ Weathering Products (all in vol.%)

_____ No. of Points

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

SiL	FeNi	FeS	FeOON	
24055	12812	58866	46873	
<u>29749</u>	<u>12820</u>	<u>58939</u>	<u>46928</u>	
894	8	73	55	= 1030
86.8	0.8	7.1	5.3	vol. %
3.3	7.1	4.6	4.3	g/cc
286.4	5.7	36.7	22.79	g
	1.6	10.4	6.5	WT %