TYPE 4

CLASSIFICATION OF ORDINARY CHONDRITES

Meteorite CEDAR #3 "TMM USNM" & "SM 1009"

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 None

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

CHONDRULE TYPES — (All Present) Some Missing _____

WEATHERING — (Pigments) (Patches) (Veins) MOSTLY

METAL — Fresh (Weathering Rims) (Islands) (Replaced)

TROILITE — Fresh (Weathering Rims) Islands Replaced ALTER TO FENT ON CRACKS

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 PARTIALLY SHOCK-BLACKENED VEINS & POCKETS

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

Point Count on TMM USNM

Sil	Fe, Ni	FeS	FeOOH	
30700	12837	59001	47152	
31421	12841	59094	47270	
721	4	93	118	= 936
77.0	0.4	9.9	12.6	%
3.3	7.6	4.6	4.3	g/cc
254.1	3.04	45.54	54.18	g = 356.86
71.2	0.9	12.8	15.2	wt %