Buzzard Coulee

Basic information	**Name:** Buzzard Coulee This is an OFFICIAL meteorite name. **Abbreviation:** There is no official abbreviation for this meteorite. **Observed fall:** Yes **Year fell:** 2008 **Country:** Canada **Mass:** 41 kg
Classification history:	Meteoritical Bulletin: MB 95 (2009) H4 **Recommended:** **H4** [explanation] This is 1 of 3600 approved meteorites (plus 2 unapproved names) classified as H4. [show all] Search for other: H chondrites (type 4-7), Ordinary chondrites (type 4-7), H chondrites, and Ordinary chondrites
Comments:	Approved 12 Feb 2009
Writeup	Writeup from MB 95:

Buzzard Coulee 52°59.76′N, 109°50.89′W
Wilton Rural Municipality, Saskatchewan, Canada
Fall: 20 November 2008; 17:26:45 MST (UT + 7)
Ordinary chondrite (H4)

History: A bright fireball was widely observed across Alberta, Saskatchewan and Manitoba during late twilight on November 20, 2008. The fireball and subsequent dust trail, or shadows cast by the fireball, were recorded by all-sky and security video cameras establishing that its brightest portion occurred from 17:26:40 to 17:26:45 MST. The fireball traveled approximately north to south with an elevation angle of ~60°. Abundant sonic phenomena were reported including anomalous sounds, explosion booms, sonic booms from individual fragments and whirring sounds interpreted as produced by individual fragments falling to ground; the fireball's explosions were also widely recorded by Comprehensive Test Ban Treaty infrasound stations establishing an energy release of approximately one third of a kiloton, indicating an original meteoroid mass of ~10 tons. Interviews of eyewitnesses and crude calibrations of security cameras constrained the fall region and the first search attempt led to meteorites being recovered off the ice of a manmade pond late on November 27, 2008. Subsequent searches led to recovery of more than one hundred individual fragments before December 6 when increasing snow cover made further searching unproductive. A strewn field at least seven kilometers long and approximately three km wide with a wind drift tail of an additional three km eastwards has been crudely outlined.

Physical characteristics: A total of 129 well-substantiated pieces totaling ~41 kg have been recovered, but dozens of additional recovered specimens are indicated. The meteorites are distinguished by the large number of specimens with immature ablation surfaces (angular shapes with numerous small piezoglypts); up-range in the strewn field a larger proportion of mature ablation surfaces and oriented individuals are found. The fusion crust is a typical dark gray for an ordinary chondrite fall. The fall is also distinguished by the large proportion of meteorites that exhibit freshly broken surfaces with no fusion crust; broken surfaces with variable amounts of "painting" by fusion crust are also common.

Petrography (M. Hutson and A. Ruzicka, *Cascadia*; E. Milley and A. Hildebrand, *UCalg*): Most surfaces show no brecciation, but one surface has a slightly lighter gray angular clast in a uniform gray matrix. Two different chondrite

textures are visible in one thin section, but boundaries between the two regions are indistinct. One area has welldefined chondrules. The other region has more opaques with fewer easily visible chondrules, but has numerous smaller cryptocrystalline chondrules and chondrule fragments. Another section contains a light colored, coarse grained, pyroxene-rich inclusion with an igneous texture.
Mineral compositions and geochemistry: Olivine ($Fa_{17.8 \pm 0.3}$) with PMD Fa = 1.3, low-Ca pyroxene ($Fs_{16.6 \pm 0.8}$, $Wo_{1.87 \pm 0.8}$) with PMD Fs = 3.9, high-Ca pyroxene ($Fs_{12.4 \pm 3.3}$, $Wo_{20.1 \pm 11.2}$). The composition of high-Ca pyroxene is suggestive of pigeonite, but may be an intimate mixture of low- and high- Ca pyroxene.
Classification: Ordinary chondrite (H4), S2, W0.
Type specimens: A mass of 39.1 g and two thin sections are on deposit at *UCalg*. The strewn field is almost all private land so that much of the meteorite mass is currently owned by private individuals; specimens totaling >1 kg include ~13 kg, 6.99 kg, 1.607 kg, 1.306 kg, 1.201 kg, and 1.082 kg; three of these specimens were recovered during searches organized by *UCalg* and collaborating institutions.

Data from: MB95 Table 3 Line 1:

State/Prov/County:	Wilton Rural Municipality, Saskatchewan,
Date:	20-Nov-08
Latitude:	52°59.76?N
Longitude:	109°50.89?W
Mass (g):	41,000
Pieces:	129
Class:	H4
Shock stage:	S2
Weathering grade:	W0
Fayalite (mol%):	17.8
Ferrosilite (mol%):	16.6
Wollastonite (mol%):	1.9
Classifier:	M. Hutson and A. Ruzicka, Cascadia, E. Milley and A. Hildebrand, UCalg
Type spec mass (g):	39.1
Type spec location:	Ucalg
Main mass:	anonymous

Institutions and collections

Cascadia: Cascadia Meteorite Laboratory, Portland State University, Department of Geology, Room 17 Cramer Hall, 1721 SW Broadway, Portland, OR 97201, USA (institutional address)
UCalg: University of Calgary, Calgary, Alberta T2N 1N4, Canada (institutional address)

Catalogs:

References:

Published in Meteoritical Bulletin, no. 95, MAPS 44, 429-462 (2009)

Find references in NASA ADS:

Find references in Google Scholar:

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	The Tricottet Collection	
	Wandering Star	
	Woreczko Jan & Wadi	
Geography: 	**Coordinates:** **Recommended:**: (52° 59' 46"N, 109° 50' 53"W) **Statistics:** This is 1 of 12 approved meteorites from Saskatchewan, Canada (plus 6 impact craters) This is 1 of 59 approved meteorites from Canada (plus 5 unapproved names) (plus 30 impact craters) View Google Map	
Proximity search:	Find nearby meteorites: enter search radius (km): Search!	
Also see:	See what others liked This lists the most popular meteorites among people who looked up this meteorite.	
Revision history:	Revision history This lists important revisions made to data for this record.	

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