

# Fossil Fusulinid Re-evaluation Results for U.S. Geological Survey Thin Sections from the Aspen Grove, Charleston, Granger Mountain, Springville, and Wallsburg Ridge Quadrangles, Utah

by

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## INTRODUCTION

This Open-File Report makes available reports from fossil fusulinid evaluations completed to determine the age of rock samples collected during geologic investigations funded or partially supported by the Utah Geological Survey (UGS) and the U.S. Geological Survey National Cooperative Geologic Mapping Program (STATEMAP). Table 1 provides the sample numbers and locations for the fossil data. The references listed in table 1 generally provide additional information such as sample location, geologic setting, and significance or interpretation of the samples in the context of the area where they were collected. The fossil fusulinid reports and selected images were prepared by A.J. Wells, independent paleontologist, Parker, Colorado, under contract to the UGS (see appendix). Constenius selected representative samples for re-evaluation from thin sections of rock samples previously collected and evaluated by the U.S. Geological Survey (USGS). Wells re-evaluated the selected thin sections mounted on glass slides. The rock samples and thin sections were from part of the Strawberry 30' quadrangle (Aspen Grove and Wallsburg Ridge 7.5' quadrangles) and the Springville 7.5' quadrangle (see Baker and others, 1949), within the Provo 30' x 60' quadrangle. The USGS thin sections are now part of the Douglass-Henbest collection maintained at the Smithsonian Institution in Washington, D.C. These data are technical in nature and interpretation requires considerable training and experience in applicable paleontologic techniques and systematics, as well as an understanding of stratigraphic paleontology.

## DISCLAIMER

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The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

## ACKNOWLEDGMENTS

Geologic mapping of the Provo 30' x 60' quadrangle was funded by the UGS and U.S. Geological Survey, National Cooperative Geologic Mapping Program through USGS STATEMAP award numbers 99HQAG0138 (1999-2000), 01HQAG100 (2001-02), 02HQAG055 (2002-03), 03HQAG0096 (2003-04), 04HQAG0040 (2004-05), 05HQAG0084 (2005-06), 06HQAG0037 (2006-07).

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**Table 1.** Sample numbers and locations for fossil fusulinid reevaluation reports for U.S. Geological Survey thin sections from the Aspen Grove, Charleston, Granger Mountain, Springville, and Wallsburg Ridge 7.5' quadrangles, Utah.

Sample No.	7.5' Quadrangle	UTM easting NAD27-12	UTM northing NAD27-12	Latitude (°N) WGS84	Longitude (°W) WGS84	Reference
f1150 (1 to 4)	Wallsburg Ridge	458995	4457322	40.2672	111.4830	Baker and Love, 1938
f1150 (5 to 9)	Wallsburg Ridge	458995	4457322	40.2672	111.4830	Baker and Love, 1938
f12128 (1)	Aspen Grove	454839	4469717	40.3787	111.5327	Baker and others, 1949
f12128 (2)	Aspen Grove	454839	4469717	40.3787	111.5327	Baker and others, 1949
f12128 (3)	Aspen Grove	454839	4469717	40.3787	111.5327	Baker and others, 1949
f12128 (4)	Aspen Grove	454839	4469717	40.3787	111.5327	Baker and others, 1949
f12128 (5)	Aspen Grove	454839	4469717	40.3787	111.5327	Baker and others, 1949
f12129 (1)	Aspen Grove	454859	4469699	40.3785	111.5325	Baker and others, 1949
f12129 (2)	Aspen Grove	454859	4469699	40.3785	111.5325	Baker and others, 1949
f12129 (3)	Aspen Grove	454859	4469699	40.3785	111.5325	Baker and others, 1949
f12129 (4)	Aspen Grove	454859	4469699	40.3785	111.5325	Baker and others, 1949
f12129 (5)	Aspen Grove	454859	4469699	40.3785	111.5325	Baker and others, 1949
f12130 (1)	Aspen Grove	454886	4469708	40.3786	111.5322	Baker and others, 1949
f12130 (2)	Aspen Grove	454886	4469708	40.3786	111.5322	Baker and others, 1949
f12130 (3)	Aspen Grove	454886	4469708	40.3786	111.5322	Baker and others, 1949
f12130 (4)	Aspen Grove	454886	4469708	40.3786	111.5322	Baker and others, 1949
f12130 (5)	Aspen Grove	454886	4469708	40.3786	111.5322	Baker and others, 1949
f12131 (1)	Aspen Grove	455097	4469661	40.3782	111.5297	Baker and others, 1949
f12131 (2)	Aspen Grove	455097	4469661	40.3782	111.5297	Baker and others, 1949
f12131 (3)	Aspen Grove	455097	4469661	40.3782	111.5297	Baker and others, 1949
f12131 (4)	Aspen Grove	455097	4469661	40.3782	111.5297	Baker and others, 1949
f12131 (5)	Aspen Grove	455097	4469661	40.3782	111.5297	Baker and others, 1949
f12132 (1)	Aspen Grove	455448	4469641	40.3780	111.5256	Baker and others, 1949
f12132 (2)	Aspen Grove	455448	4469641	40.3780	111.5256	Baker and others, 1949
f12132 (3)	Aspen Grove	455448	4469641	40.3780	111.5256	Baker and others, 1949
f12132 (4)	Aspen Grove	455448	4469641	40.3780	111.5256	Baker and others, 1949
f12132 (5)	Aspen Grove	455448	4469641	40.3780	111.5256	Baker and others, 1949
f12133 (1)	Aspen Grove	* 456202	4469655	40.3782	111.5167	Baker and others, 1949
f12133 (2)	Aspen Grove	* 456202	4469655	40.3782	111.5167	Baker and others, 1949
f12133 (3)	Aspen Grove	* 456202	4469655	40.3782	111.5167	Baker and others, 1949
f12134 (1)	Charleston	* 457847	4469362	40.3756	111.4973	Baker and others, 1949
f12134 (2)	Charleston	* 457847	4469362	40.3756	111.4973	Baker and others, 1949
f12134 (3)	Charleston	* 457847	4469362	40.3756	111.4973	Baker and others, 1949
f12134 (4)	Charleston	* 457847	4469362	40.3756	111.4973	Baker and others, 1949
f12136 (1)	Wallsburg Ridge	459345	4467273	40.3569	111.4795	Baker and others, 1949
f12136 (2)	Wallsburg Ridge	459345	4467273	40.3569	111.4795	Baker and others, 1949
f12136 (3)	Wallsburg Ridge	459345	4467273	40.3569	111.4795	Baker and others, 1949
f12136 (4)	Wallsburg Ridge	459345	4467273	40.3569	111.4795	Baker and others, 1949
f12137 (1)	Wallsburg Ridge	459726	4466674	40.3515	111.4750	Baker and others, 1949
f12137 (2)	Wallsburg Ridge	459726	4466674	40.3515	111.4750	Baker and others, 1949
f12137 (3)	Wallsburg Ridge	459726	4466674	40.3515	111.4750	Baker and others, 1949
f12137 (4)	Wallsburg Ridge	459726	4466674	40.3515	111.4750	Baker and others, 1949
f12137	Wallsburg Ridge	459726	4466674	40.3515	111.4750	Baker and others, 1949
f12138 (1 to 3)	Wallsburg Ridge	* 459983	4466365	40.3487	111.4719	Baker and others, 1949
f12138 (4 to 5)	Wallsburg Ridge	* 459983	4466365	40.3487	111.4719	Baker and others, 1949
f12139 (1)	Wallsburg Ridge	* 460434	4466155	40.3500	111.4614	Baker and others, 1949
f12139 (2)	Wallsburg Ridge	* 460434	4466155	40.3500	111.4614	Baker and others, 1949
f12139 (3)	Wallsburg Ridge	* 460434	4466155	40.3500	111.4614	Baker and others, 1949
f12139 (4 to 10)	Wallsburg Ridge	* 460434	4466155	40.3500	111.4614	Baker and others, 1949
f12141 (1 to 2)	Wallsburg Ridge	461000	4465673	40.3425	111.4599	Baker and others, 1949
f12141 (3)	Wallsburg Ridge	461000	4465673	40.3425	111.4599	Baker and others, 1949
f12141 (4)	Wallsburg Ridge	461000	4465673	40.3425	111.4599	Baker and others, 1949
f12141 (5 to 6)	Wallsburg Ridge	461000	4465673	40.3425	111.4599	Baker and others, 1949
f12141 (7)	Wallsburg Ridge	461000	4465673	40.3425	111.4599	Baker and others, 1949
f12141 (8 to 10)	Wallsburg Ridge	461000	4465673	40.3425	111.4599	Baker and others, 1949
f12143 (1)	Wallsburg Ridge	462572	4463595	40.3239	111.4413	Baker and others, 1949
f12143 (2)	Wallsburg Ridge	462572	4463595	40.3239	111.4413	Baker and others, 1949
f12143 (3)	Wallsburg Ridge	462572	4463595	40.3239	111.4413	Baker and others, 1949
f12143 (4 to 5)	Wallsburg Ridge	462572	4463595	40.3239	111.4413	Baker and others, 1949

Sample No.	7.5' Quadrangle	UTM easting NAD27-12	UTM northing NAD27-12	Latitude (°N) WGS84	Longitude (°W) WGS84	Reference
f9600 (1 to 6)	Springville	454063	4444962	40.1556	111.5401	Baker, 1973
f9602 (1)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9602 (2)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9602 (3)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9602 (4)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9602 (5)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9602 (6)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9602 (7 to 8)	Springville	456444	4445779	40.1631	111.5122	Baker, 1973
f9604 (1 to 2) Large	Springville	457007	4447933	40.1825	111.5057	Baker, 1973
f9604 (1 to 2)	Springville	457007	4447933	40.1825	111.5057	Baker, 1973
f9604 (3 to 4)	Springville	457007	4447933	40.1825	111.5057	Baker, 1973
f9604 (5)	Springville	457007	4447933	40.1825	111.5057	Baker, 1973
f9604 (6 to 8)	Springville	457007	4447933	40.1825	111.5057	Baker, 1973
f9604 (9 to 12)	Springville	457007	4447933	40.1825	111.5057	Baker, 1973
f9606 (1)	Springville	456917	4445256	40.1584	111.5066	Baker, 1973
f9606 (2)	Springville	456917	4445256	40.1584	111.5066	Baker, 1973
f9606 (3)	Springville	456917	4445256	40.1584	111.5066	Baker, 1973
f9606 (4)	Springville	456917	4445256	40.1584	111.5066	Baker, 1973
f9606 (5 to 6)	Springville	456917	4445256	40.1584	111.5066	Baker, 1973
f9607 (1 to 2)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (3 to 4)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (5 to 6)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (7 to 8)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (9 to 11)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (12 to 16)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (17)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (18 to 20)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 (21)	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9607 Large	Springville	457006	4445156	40.1575	111.5056	Baker, 1973
f9608 (1)	Springville	457032	4445082	40.1568	111.5053	Baker, 1973
f9608 (2)	Springville	457032	4445082	40.1568	111.5053	Baker, 1973
f9608 (3)	Springville	457032	4445082	40.1568	111.5053	Baker, 1973
f9608 (4 to 6)	Springville	457032	4445082	40.1568	111.5053	Baker, 1973
f9608 (7 to 10)	Springville	457032	4445082	40.1568	111.5053	Baker, 1973
f9610 (1 to 5)	Granger Mountain	* 457483	4445364	40.1594	111.5000	USGS archive
f9610 (1 to 2) Large	Granger Mountain	* 457483	4445364	40.1594	111.5000	USGS archive
f9611 (1) Large	Springville	457044	4449168	40.1937	111.5054	Baker, 1973
f9611 (1)	Springville	457044	4449168	40.1937	111.5054	Baker, 1973
f9611 (2 to 5)	Springville	457044	4449168	40.1937	111.5054	Baker, 1973
f9612 (1 to 4)	Springville	456048	4448626	40.1887	111.5171	Baker, 1973
f9612 (5 to 8)	Springville	456048	4448626	40.1887	111.5171	Baker, 1973
f9615 (1)	Springville	453283	4444869	40.1547	111.5493	Baker, 1973
f9615 (2 to 4)	Springville	453283	4444869	40.1547	111.5493	Baker, 1973
f9615 (5 to 7)	Springville	453283	4444869	40.1547	111.5493	Baker, 1973
f9615 (8)	Springville	453283	4444869	40.1547	111.5493	Baker, 1973
f9619 (1 to 2)	Granger Mountain	* 457530	4442369	40.1324	111.4992	USGS archive
f9619 (3 to 6)	Granger Mountain	* 457530	4442369	40.1324	111.4992	USGS archive
f9619 (7 to 10)	Granger Mountain	* 457530	4442369	40.1324	111.4992	USGS archive
f9619 (11 to 13)	Granger Mountain	* 457530	4442369	40.1324	111.4992	USGS archive
f9619 (14 to 15)	Granger Mountain	* 457530	4442369	40.1324	111.4992	USGS archive
f9620 (4)	Springville	456268	4443530	40.1428	111.5141	Baker, 1973
f9620 (5)	Springville	456268	4443530	40.1428	111.5141	Baker, 1973
f9620 (6 to 8)	Springville	456268	4443530	40.1428	111.5141	Baker, 1973
f9620 (9 to 10)	Springville	456268	4443530	40.1428	111.5141	Baker, 1973
f9620 (11 to 12)	Springville	456268	4443530	40.1428	111.5141	Baker, 1973
f9621 (1)	Springville	456223	4443555	40.1430	111.5147	Baker, 1973
f9621 (2)	Springville	456223	4443555	40.1430	111.5147	Baker, 1973
f9621 (3 to 6)	Springville	456223	4443555	40.1430	111.5147	Baker, 1973
f9621 (7 to 9)	Springville	456223	4443555	40.1430	111.5147	Baker, 1973
f9621 (10 to 14)	Springville	456223	4443555	40.1430	111.5147	Baker, 1973

Table 1. Continued.

Sample No.	7.5' Quadrangle		UTM easting NAD27-12	UTM northing NAD27-12	Latitude (°N) WGS84	Longitude (°W) WGS84	Reference
f9622 (1 to 2)	Granger Mountain	*	457519	4442003	40.1291	111.4993	USGS archive
f9622 (3 to 4)	Granger Mountain	*	457519	4442003	40.1291	111.4993	USGS archive
f9622 (5 to 7)	Granger Mountain	*	457519	4442003	40.1291	111.4993	USGS archive
f9622 (8 to 13)	Granger Mountain	*	457519	4442003	40.1291	111.4993	USGS archive
f9622 (14 )	Granger Mountain	*	457519	4442003	40.1291	111.4993	USGS archive
f9622 (15 to 22)	Granger Mountain	*	457519	4442003	40.1291	111.4993	USGS archive
f9623 (1 to 2)	Springville		453394	4443510	40.1425	111.5479	Baker, 1973
f9623 (3 to 6)	Springville		453394	4443510	40.1425	111.5479	Baker, 1973
f9623 (7 to 8)	Springville		453394	4443510	40.1425	111.5479	Baker, 1973
f9623 (9 to 13)	Springville		453394	4443510	40.1425	111.5479	Baker, 1973
f9624 ( 1 to 2)	Springville		454243	4443167	40.1394	111.5379	Baker, 1973
f9624 (3 to 8)	Springville		454243	4443167	40.1394	111.5379	Baker, 1973
f9625 (1)	Springville		454783	4443250	40.1402	111.5315	Baker, 1973
f9625 (2 to 13)	Springville		454783	4443250	40.1402	111.5315	Baker, 1973
f9626 (1)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (1) Large	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (2 to 3)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (2) Large	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (3) Large	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (4 to 7)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (8 to 9)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (10 to 11)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (12 to 14)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9626 (15 to 16)	Springville		455541	4443760	40.1449	111.5227	Baker, 1973
f9627 (1 to 3)	Springville		454798	4442553	40.1339	111.5313	Baker, 1973
f9627 (4 to 6)	Springville		454798	4442553	40.1339	111.5313	Baker, 1973
f24395 (1 to 18)	Springville		456575	4452386	40.2226	111.5111	Baker, 1973
f24398 (1)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (2 to 3)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (4 to 7)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (8 to 11)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (12)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (13 to 15)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (16)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973
f24398 (17 to 21)	Springville		453318	4443185	40.1396	111.5487	Baker, 1973

## Notes:

\*= Approximate location

Accuracy of individual sample locations varies significantly.

All samples in the Provo 30' x 60' quadrangle.

See reports and geologic maps by Baker (1947, 1964, 1973, 1976), and geologic maps of Constenius and others (2011, in preparation).

Fusulinid samples collected by A. Baker (USGS).

Fusulinids evaluated by L.G. Henbest and R.C. Douglass (USGS).

Douglass-Henbest collection maintained at the Smithsonian Institution, Washington D.C.

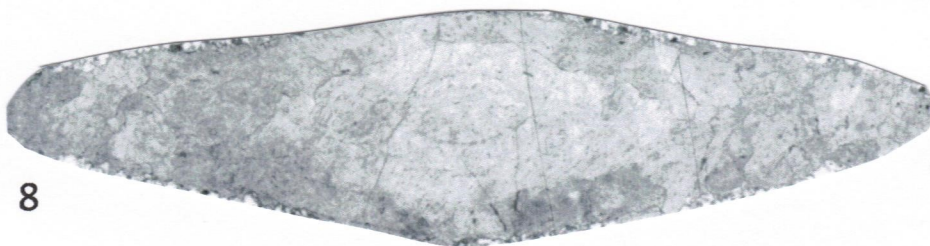
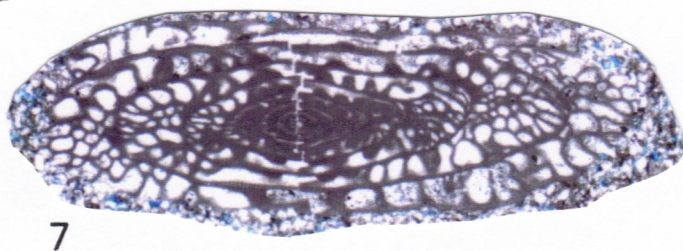
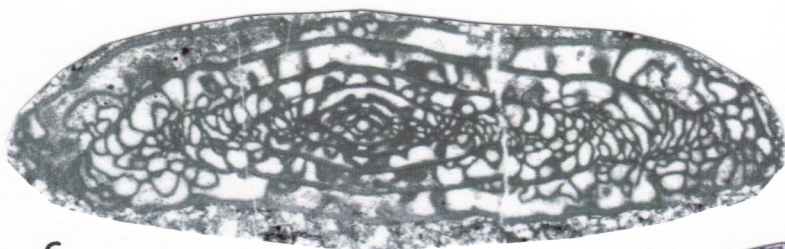
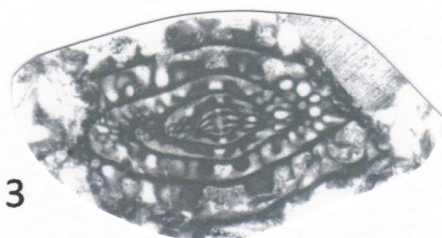
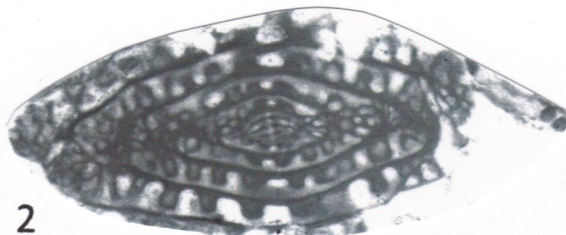
The USGS thin sections (noted above) were reevaluated by A.J. Wells for UGS.

## APPENDIX

## PLATE I

- Figure 1 F12128 *Beedeina* Galloway 1953  
 Highly abraded X9  
 Appears to be a pre *Wedekindellina*, *Beedeina*  
 Lower Desmoinesian
- Figure 2 F12133 *Beedeina* Galloway 1953  
 Highly abraded X14  
 Lower Desmoinesian
- Figure 3 F12132 *Beedeina* Galloway 1953  
 Highly abraded X13  
 Flat right side is where a crinoid pressed against fusulinid  
 Lower Desmoinesian
- Figure 4 F12134 *Triticites* cf. *T. springvillensis* Thompson, Verville Bissell 1950  
 Lower Missourian X15
- Figure 5 F24395 *Pseudofusulinella* Thompson 1951  
 Highly abraded X16  
 Missourian - Virgilian
- Figure 6 F9623 *Kansanella* cf. *K. witerensis* Thompson, Verille & Locke 1956  
 Upper Missourian X24
- Figure 7 F9627 *Kansanella* cf. *K. plicatulo* Merchant & Keroher 1939  
 Well abraded X18  
 Upper Missourian
- Figure 8 F12136 *Triticites* Girty 1904  
 Highly abraded and silicified X20  
 Virgilian

# PLATE I



## PLATE II

Figure 1 F907B *Pseudofusulinella* Thomson 1951  
Highly abraded X17  
Lower Wolfcampian

Figure 2 F1150 *Triticites* Girty 1904  
Highly abraded X9  
Lower Wolfcampian

Figure 3 F9607 *Triticites* Girty 1904  
Highly abraded X16  
Lower Wolfcampian

Figure 4 F24398 *Triticites cf. T. creekensis* Thompson 1951  
Highly abraded X13  
Lower Wolfcampian

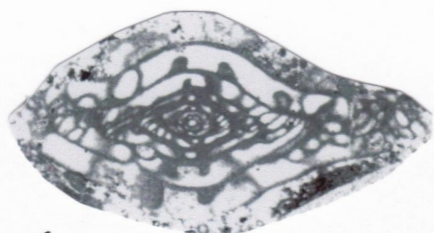
Figure 5 F9619 *Schwagerina* Moller 1877  
Highly abraded X16  
Lower Wolfcampian

Figure 6 F1150B *Triticites* Girty 1904  
Highly abraded X8  
Lower Wolfcampian

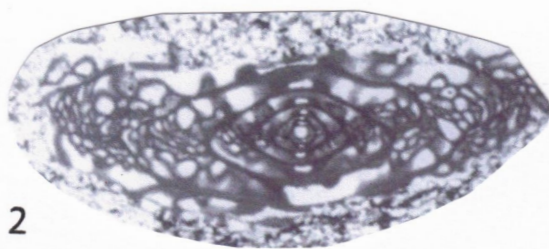
Figure 7 F12141 *Schwagerina* Moller 1877  
Highly abraded X20  
Lower Wolfcampian

Figure 8 12143B *Pseudoschwagerina* Dunbar & Skinner 1936  
Highly abraded X18  
Lower - Middle Wolfcampian

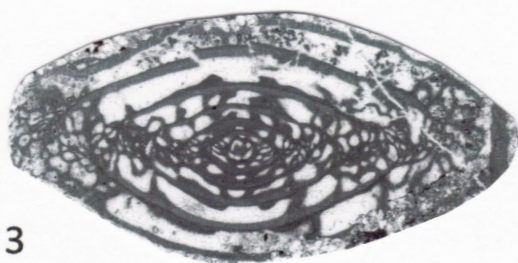
## PLATE II



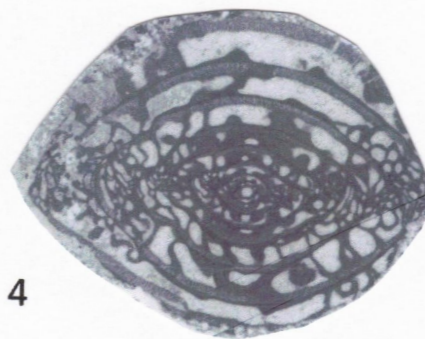
1



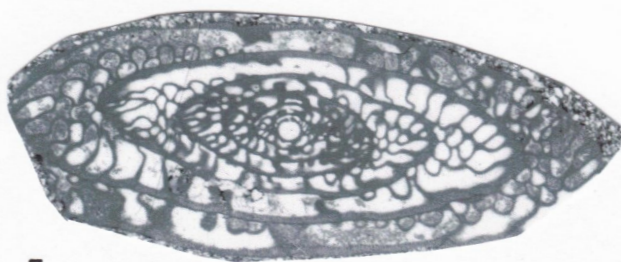
2



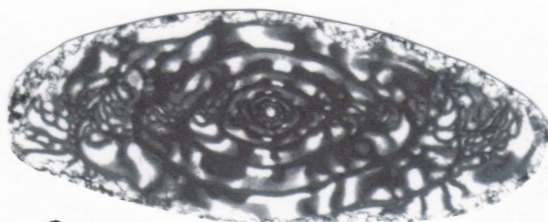
3



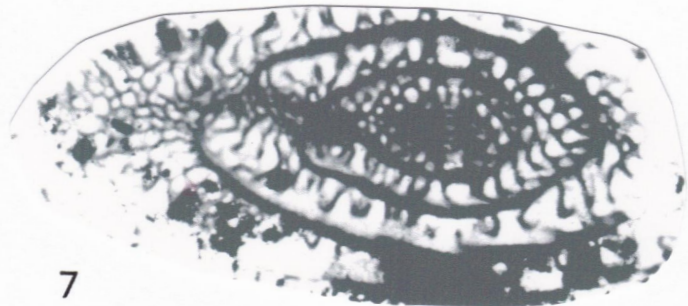
4



5



6



7



8

Utah Geological Survey  
Slide No. f – 1150 (1), (2), (3), (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian lower

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, calcareous, very fine grained quartz Sandstone.

COMMENTS: The fusulinids are very elongate with very little high fluting and well preserved except the exterior walls are eroded. No Schwagerinas were present for positive Wolfcampian age. These fusulinids are very close to Triticites meeki which has been called lower Wolfcampian in Utah literature.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 1150 (5), (6), (7), (8), (9)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian lower

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, calcareous, very fine grained quartz Sandstone.

COMMENTS: Triticites with oblique axial sections and fragments are present. No Schwagerinas were present for positive Wolfcampian age. These fusulinids are very close to Triticites meeki which has been called lower Wolfcampian in Utah literature.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12128 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Pre Missourian**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, bryozoan, fusulinid, small foraminifera,  
medium and well rounded quartz grains Packstone.

COMMENTS: Fusulinids present, sagittal sections only, 4 layer wall Pre Missourian.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f- 12128 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, bryozoan, fusulinid, small foraminifera,  
medium and well rounded quartz grains Packstone.

COMMENTS: A poor sagittal section of Fusulina is present.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12128 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, bryozoan, pelecypod, fusulinid Wackstone.

COMMENTS: If I had to guess age it would be Desmoinesian because of 4 layer wall.  
This slide is Wackstone and not Packstone.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f- 12128 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower most

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, bryozoan, ostracod, fusulinid, very small foraminifera  
Packstone.

COMMENTS: A very primitive Fusulina, probably a pre Wedekindellina Fusulina.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12128 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower most

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, bryozoan, pelecypod, small foramenifera,  
fusulinid, well rounded quartz grains Packstone.

COMMENTS: A very primitive Fusulina, probably a pre Wedekindellina Fusulina.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12129 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Wedekindellina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, calcareous, fine grained quartz Sandstone.

COMMENTS: Fusulinids are highly abraded and have little axial filling.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12129 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Wedekindellina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, calcareous, fine grained quartz Sandstone.

COMMENTS: Fusulinids are highly abraded and has little axial filling.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f- 12129 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Wedekindellina  
Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Abundant fusulinid, calcareous fine grained quartz Sandstone.

COMMENTS: Fusulinids are highly abraded and has little axial filling. It has a couple of poorly oriented Fusulinas present.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12129 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Wedekindellina  
Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, calcareous, fine grained quartz Sandstone.

COMMENTS: Fusulinids are highly to partially abraded.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12129 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Wedekindellina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, calcareous, fine grained quartz Sandstone.

COMMENTS: Most of the fusulinids are highly abraded. A few are in good shape.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f- 12130 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, very fine grained quartz grains Wackestone.

COMMENTS: Fusulinids are slightly to highly abraded.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12130 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fine grained quartz grains in fusulinid, crinoid Wackestone.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f – 12130 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

Wedekindalina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, very fine quartz grains in Wackestone.

COMMENTS: Primitive Fusulinas are present. A poor oblique axial section of a Wedekindellina is present.

Age date with thin sections

A.J. Wells  
June 4, 2009

Utah Geological Survey  
Slide No. f- 12130 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

No fusulinid present

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Small foraminifera, crinoid, pelecypod Wackestone.

COMMENTS: Looks like part of a Millerella present.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f– 12130 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Wedekindellina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, very fine grained quartz Wackestone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12131 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, fusulinid, pelecypod, bryozoan, medium size well rounded quartz grains Grainstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12131 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, fusulinid, pelecypod, bryozoan, medium size  
well rounded quartz grains Grainstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12131 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian lower

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, fusulinid, pelecypod, bryozoan, medium well  
rounded quartz grains Grainstone.

COMMENTS: Poor thin section of Fusulina. It is identifiable.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12131 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, fusulinid, pelecypod, bryozoan, medium sized well rounded quartz grains Grainstone.

COMMENTS: A juvenile Fusulina is present.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12131 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, fusulinid, pelecypod, bryozoan, medium sized  
quartz grains Grainstone.

COMMENTS: Small primitive Fusulina with abundant fluting.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12132 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, medium sized  
quartz grains Packstone.

COMMENTS: Poor oblique and sagittal sections of Fusulina.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12132 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, medium sized  
quartz grains Packstone.

COMMENTS: Poor sagittal section of a Fusulina.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12132 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, medium sized  
quartz grains Packstone.

COMMENTS: Small very well fluted oblique Fusulina.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12132 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, medium sized  
quartz grains Packstone.

COMMENTS: Poor oblique section of Fusulina.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12132 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian lower**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, medium sized  
quartz grains Packstone.

COMMENTS: Good section of Fusulina, well fluted and abraded.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12133 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian middle to upper middle**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, medium size  
quartz grains Packstone.

COMMENTS: Highly fluted, abraded Fusulina.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12133 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

No fusulinid in thin section

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, small foraminifera,  
medium quartz grains Packstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12133 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Fusulina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

**Desmoinesian middle to upper middle**

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Crinoid, pelecypod, bryozoan, fusulinid, small foraminifera,  
medium quartz grains Packstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12134 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites cf. T. springervillensis

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian lower

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, calcareous very fine grained  
Sandstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f– 12134 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, calcareous very fine grained  
Sandstone.

COMMENTS: Good thin section but all fusulinids are juveniles and poorly oriented.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12134 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites cf. T. springervillensis

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian lower

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, calcareous very fine grained  
Sandstone.

COMMENTS: Good axial sections of a primitive Triticites.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12134 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites cf. T. springervillensis

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian lower**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, calcareous very fine grained  
Sandstone.

COMMENTS: Poor section of unoriented fusulinids. Some Triticites are replaced with  
silica.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12136 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, silicified very fine grained quartz Sandstone.

COMMENTS: The fusulinids are completely replaced with silica and seem to be more advanced than sample # f-12134. Narrow and elongate with lots of fluting but completely silicified. Exterior is eroded.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12136 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          Very Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded, silicified fusulinid in calcareous very fine grained quartz Sandstone.

COMMENTS: The fusulinids are larger and completely silicified.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12136 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded, silicified fusulinids in calcareous,  
very fine grained quartz Sandstone.

COMMENTS: Long 8.4 mm and eroded in Sandstone.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12136 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded, silicified fusulinids in calcareous  
quartz very fine grained Sandstone.

COMMENTS: The two layer wall shows up good in some of the fusulinids.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12137 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Abraded fusulinids (well preserved) in calcareous quartz  
Sandstone.

COMMENTS: The Fusulinid is abraded on the outside but will preserved on the inside.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12137 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Abraded fusulinid, calcareous, very fine grained quartz  
Sandstone.

COMMENTS: It has a poorly preserved juvenile Triticites.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12137 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Abraded fusulinid, in a calcareous very fine grained quartz Sandstone.

COMMENTS: I am not sure that the very small, poorly oriented fusulinids present that have been called Eowaeringella is correct. Because the fusulinids in the thin sections are of poor quality they could be juvenile Pseudofusulinellas.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f– 12137 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Abraded fusulinid in calcareous very fine  
grained quartz Sandstone.

COMMENTS: Poor section.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey

Slide No. f – 12137

**Three thin sections – No slide # but f-12137 etched in slides**

1 x 3 slide with cover slip

LOCATION: Oquirrh Formation, Strawberry Quad

Baker & Williams 1947

FUSULINID TAXA

Triticites

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

Fair

**Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Very small fusulinid fragments in a very fine grained calcareous quartz Sandstone.

COMMENTS: The fusulinids are very small juveniles and poorly sectioned. The third thin section has a small Triticites with erosion on the outside, has fairly high fluting and enough is present to call Virgilian age.

Age date with thin sections

A.J. Wells

June 6, 2009

Utah Geological Survey  
Slide No. f – 12138 (1), (2),(3)

1 x 3 slide with cover slip

LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids fragments, black pyrobitumen is present in very fine – medium grained quartz Sandstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12138 (4), (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinid fragments, black pyrobitumen is present in very fine – medium grained quartz Sandstone.

COMMENTS: Both thin sections have a poorly oriented section of a Triticites.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f- 12139 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid in very fine grained quartz sandstone.

COMMENTS: Fair section of Triticites with fairly large proloculus.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12139 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid in very fine grained quartz sandstone.

COMMENTS: Poor section of fusulinid.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12139 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid in very fine grained quartz Sandstone.

COMMENTS: Several fragments of highly eroded fusulinids with fairly good high fluting.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12139 (4), (5), (6), (7), (8), (9), (10)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid in very fine grained quartz sandstone.

COMMENTS: Poor fragments of fairly advanced Triticites.

Age date with thin sections

A.J. Wells  
June 6, 2009

Utah Geological Survey  
Slide No. f – 12141 (1),(2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Schwagerina

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids in slightly calcareous fine – medium grained quartz Sandstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f– 12141 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Schwagarina

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids in slightly calcareous fine – medium grained quartz Sandstone.

COMMENTS: Has a poor section of Pseudofusulinella.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f – 12141 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Schwagerina

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids in slightly calcareous fine – medium grained quartz Sandstone.

COMMENTS: Has a poor section of Schwagerina.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f – 12141 (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Schwagerina

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids in slightly calcareous fine – medium grained quartz Sandstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f– 12141 (7)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Schwagerina

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids in slightly calcareous fine – medium grained quartz Sandstone.

COMMENTS: Sagital section with very large proloculus.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f – 12141 (8), (9), (10)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Triticites

Schwagerina

Pseudofusulinella

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

Fair

**Poor**

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Highly abraded fusulinids in slightly calcareous fine – medium grained quartz Sandstone.

COMMENTS: Very poor fragments of fusulinids.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f – 12143 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Pseudoschwagerina uddeni  
Schwagerina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolcampian lower - middle**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, small foraminifera, calcareous fine grained quartz Sandstone.

COMMENTS: Poor sections of Pseudoschwagerina uddeni and Schwagerina.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f – 12143 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Pseudoschwagerina uddeni  
Schwagerina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolcampian lower - middle**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, small foraminifera, calcareous fine grained quartz Sandstone.

COMMENTS: Poor oblique section of Pseudoschwagerina with a very large proloculus.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f- 12143 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Pseudoschwagerina uddeni

Schwagerina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolcampian lower - middle**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, crinoid, small foraminifera, calcareous fine grained quartz Sandstone.

COMMENTS: Poor oblique sections of Pseudoschwagerina uddeni and Schwagerina.

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f – 12143 (4), (5)

**2 x 3 slide with cover slip**

LOCATION: Oquirrh Formation, Strawberry Quad  
Baker & Williams 1947

FUSULINID TAXA

Pseudoschwagerina uddeni

Schwagerina

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolcampian lower - middle**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

ROCK DESCRIPTION: Fusulinid, very fine grained calcareous quartz Sandstone.

COMMENTS:

Age date with thin sections

A.J. Wells  
June 11, 2009

Utah Geological Survey  
Slide No. f 9600 (1), (2), (3), (4), (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Upper Pennsylvanian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, calcareous, very  
fine - fine grained Sandstone. Blue dyed epoxy  
cement displays 7% porosity.

COMMENTS: The *Triticites* are elongate, highly abraded, appears to have  
little fluting. Very poor thin section of fusulinids.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. 9602 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid in very fine grained quartz Sandstone.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. 9602 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan in very fine grained quartz  
Sandstone.

COMMENTS: Good fluting in elongate *Kansanella*.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. 9602 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid in very fine grained quartz Sandstone.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. 9602 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, fine fossil debris in very fine grained quartz  
Sandstone.

COMMENTS: Poor fluting in *Kansanella*.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. 9602 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid in very fine grained quartz Sandstone.

COMMENTS: Elongate *Kansanella* but fluting not well developed.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. 9602 (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid in very fine grained quartz Sandstone.

COMMENTS: Highly abraded fusulinids.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. 9602 (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid in very fine grained quartz Sandstone.

COMMENTS: The *Kansanella* are elongate and well fluted.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9604 (1), (2)  
**2 x 3 slide with cover slip**  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*  
*Oketaella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, calcareous, very fine  
grained quartz Sandstone. Blue dyed  
epoxy cement displays 11% porosity.

COMMENTS: Very large *Triticites*. No *Schwagerina* present for  
positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 11, 2009

Utah Geological Survey  
Slide No. f 9604 (1), (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine  
grained quartz in Packstone. Blue dyed epoxy  
cement displays 4% porosity.

COMMENTS: *Triticites* have low fluting. No *Schwagerina* present for  
positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9604 (3), (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine  
grained quartz in Packstone. Blue dyed epoxy  
cement displays 5% porosity.

COMMENTS: The *Triticites* are large, have thick walls and low fluting.  
They probably are Wolfcampian. No *Schwagerina* present  
for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9604 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine  
grained quartz in Packstone. Blue dyed  
epoxy cement displays 5% porosity.

COMMENTS: The *Triticites* are large and poorly fluted. There is a poorly  
oriented section of a fusulinid that appears to be *Dunbarinella*  
which would be Wolfcampian age. No *Schwagerina* present for  
positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9604 (6), (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine -  
medium grained quartz in Packstone. Blue dyed  
epoxy cement displays 6 - 8% porosity.

COMMENTS: Good thin sections of large *Triticites* and a *Schubertella*. No  
*Schwagerina* present for positive Wolfcampian age.

**Age date with thin sections**

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9604 (9), (10), (11), (12)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, pelecypod, very  
fine - medium grained quartz in Packstone. Blue  
dyed epoxy cement displays 7% porosity.

COMMENTS: Very large *Triticites* with a large proloculus. No  
*Schwagerina* present for positive Wolfcampian age.

**Age date with thin sections**

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9606 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Crinoid, bryozoan, small foraminifera, fusulinid,  
very fine grained quartz in Packstone. Blue dyed  
epoxy cement displays 7 - 9% porosity.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9606 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Crinoid, bryozoan, small foraminifera, pelecypod,  
fusulinid, very fine grained quartz in Packstone.  
. Blue dyed epoxy cement displays 7% porosity.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9606 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Crinoid, bryozoan, small foraminifera, fusulinid, very fine  
grained quartz in Packstone. Blue dyed epoxy cement  
displays 7% porosity.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9606 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Crinoid, bryozoan, pelecypod, small foraminifera, very fine  
grained quartz in Packstone. Blue dyed epoxy cement  
displays 7% porosity.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A. J. Wells  
Aug.18, 2009

Utah Geological Survey  
Slide No. f 9606 (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian upper**

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid crinoid, calcareous, fine grained quartz  
Sandstone. Blue dyed epoxy cement displays  
7% porosity.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9607 (1), (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. creekensis*  
*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, small foraminifera, algal, very fine grained quartz in Packstone. Blue dyed epoxy cement displays 8% porosity.

COMMENTS: Large *Triticites* with very large proloculus. No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (3), (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. creekensis*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**          Fair          Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, small foraminifera, very fine grained quartz in Packstone. Blue dyed epoxy cement displays 8% porosity.

COMMENTS: Large *Triticites*. No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine grained  
quartz in Packstone. Blue dyed epoxy cement displays  
7% porosity.

COMMENTS: No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, small foraminifera,  
very fine grained quartz in Packstone. Blue dyed  
epoxy cement displays 7% porosity.

COMMENTS: Large *Triticites* with little fluting. No *Schwagerina* present for  
positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (9), (10), (11)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, algal, crinoid, very  
fine grained quartz in Packstone. Blue dyed epoxy  
cement displays 6 - 8% porosity.

COMMENTS: Large *Triticites* with low fluting. No *Schwagerina* present for positive  
Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (12), (13), (14), (15), (16)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, algal, bryozoan, very fine grained  
quartz in Packstone. The blue dyed epoxy cement  
displays 7% porosity.

COMMENTS: The *Triticites* have average to low fluting. No *Schwagerina* were  
present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (17)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, pelecypod, algal, very fine grained quartz in Packstone. The blue dyed epoxy cement displays 7% porosity.

COMMENTS: Several of the *Triticites* have some high fluting. No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (18), (19), (20)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

**Fair**

**Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, pelecypod, very fine  
grained quartz in Packstone. The blue dyed epoxy cement  
displays 8% porosity.

COMMENTS: No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607 (21)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, pelecypod, fine  
grained quartz in Packstone. The blue dyed epoxy cement  
displays 5% porosity.

COMMENTS: No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9607  
**2 x 3 slide with cover slip**  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, intraclast, very fine grained quartz in Wackestone - Packstone. Blue dyed epoxy cement displays 6% porosity.

COMMENTS: The *Triticites* look like Wolfcampian but no *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9608 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. cellamagnus*  
*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**          Fair          Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, very fine - fine grained  
quartz in Packstone. Blue dyed epoxy cement displays  
6% porosity.

COMMENTS: No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9608 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, crinoid, very fine  
grained quartz in Packstone. Blue dyed epoxy  
cement displays 6% porosity.

COMMENTS: No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9608 (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, crinoid, very fine  
grained quartz in Packstone. Blue dyed epoxy  
cement displays 6% porosity.

COMMENTS: The *Triticites* are poor quality in this thin section. No  
*Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9608 (4), (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, algal,  
fine grained quartz in Packstone. Blue dyed epoxy  
displays 5% porosity.

COMMENTS: Poor section of fragments of *Triticites*. One fragment  
has a large proloculus. No *Schwagerina* present for positive  
Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9608 (7), (8), (9), (10)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. meeki*  
*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian** **lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, algal, bryozoan, pelecypod, very fine  
grained quartz in Packstone. Blue dyed epoxy  
displays 4% porosity.

COMMENTS: Very elongate *Triticites* with moderate to very high fluting.  
No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9610 (1), (2), (3), (4), (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites cf. T. cellamagnus*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

Fair

**Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, pelecypod, algal, very fine grained  
quartz in Packstone. Blue dyed epoxy cement  
displays 5% porosity.

COMMENTS: Oblique sections of *Schwagerina*.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9610 (1), (2)  
**2 x 3 slide with cover slip**  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, pelecypod, gastropod,  
algal, intraclast of Wackestone, very fine grained quartz in  
Packstone. Blue dyed epoxy cement displays 5% porosity.

COMMENTS: Large *Triticites* with large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 11, 2009

Utah Geological Survey  
Slide No. f 9611  
**2 x 3 slide with cover slip**  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, very fine grained quartz in Wackestone.  
Blue dyed epoxy cement displays 3% porosity.

COMMENTS: Long slim *Kansanella* highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 11, 2009

Utah Geological Survey  
Slide No. 9611 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinids, very small fragments of crinoids, bryozoan,  
pyrobitumen, very fine grained quartz in Wackestone  
Blue dyed epoxy cement displays 6% porosity.

COMMENTS: Very elongate *Kansanella* with tectonically fractured walls  
and fluting.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. 9611 (2), (3), (4), (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinids, bryozoan, crinoid, pyrobitumen, very  
fine grained quartz in Wackestone. Blue dyed  
epoxy cement displays 4% porosity.

COMMENTS: The *Kansanella* are elongate and highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. 9612 (1), (2), (3), (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. springvillensis*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian lower**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, fine fossil debris, calcareous, very  
fine grained quartz Sandstone. Blue dyed epoxy cement  
displays 5% porosity.

COMMENTS: These are small, thin wall, very little fluting *Triticites*.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. 9612 (5), (6), (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. springvillensis*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian lower**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, very fine grained  
quartz in Wackestone. Blue dyed epoxy cement  
displays 3-5% porosity.

COMMENTS: Very primitive *Triticites*.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9615 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, very fine grained quartz  
in Wackestone. Only a trace of blue dyed epoxy  
cement.

COMMENTS: Travertine cements present - exposed. No *Schwagerina* present  
for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9615 (2), (3), (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, very fine grained quartz  
in Wackestone. The blue dyed epoxy displays 5%  
porosity.

COMMENTS: Large *Triticites* has moderate chomata but with poor fluting.  
No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9615 (5), (6), (7)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, very fine grained  
quartz in Wackestone. The blue dyed epoxy cement  
displays 7% porosity.

COMMENTS: No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9615 (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, very fine grained quartz  
in Wackestone. Blue dyed epoxy cement displays about  
2% porosity.

COMMENTS: Large fragments of *Triticites* with poor fluting. No *Schwagerina*  
present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9619 (1), (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, algal, pelecypod, very fine  
grained quartz in Wackestone. Trace of porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9619 (3), (4), (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**

**Fair**

Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, algal, very fine grained  
quartz in Wackestone. Blue dyed epoxy cement displays  
6% porosity.

COMMENTS: The *Triticites* have high fluting. The *Schwagerina* is well fluted.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9619 (7), (8), (9), (10)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Crinoid, bryozoan, pelecypod, fusulinid, small  
foraminifera, algal, Wackestone. Blue dyed epoxy  
cement displays 4% porosity.

COMMENTS: *Schwagerina* well fluted with very large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9619 (11), (12), (13)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, algal, silicified  
Wackestone. Blue dyed epoxy cement displays  
. 6% porosity.

COMMENTS: Center part of *Schwagerina* is silicified and part of matrix.

Age date with thin sections

A. J. Wells  
Aug. 9, 2009

Utah Geological Survey  
Slide No. f 9619 (14), (15)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine grained  
quartz in Wackestone. Blue dyed epoxy cement displays  
. 2% porosity.

COMMENTS: *Schwagerina* has very high fluting.

Age date with thin sections

A. J. Wells  
Aug. 9, 2009

Utah Geological Survey  
Slide No. f 9620 (1), (2), (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, pelecypod, algal, very fine grained quartz in Packstone. Blue dyed epoxy cement displays 7% porosity.

COMMENTS: *Triticites* are very large with tectonically cracked walls and fluting. There is some high fluting and a very large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9620 (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Dunbarinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine  
grained quartz in Packstone. Blue dyed epoxy cement  
displays 6% porosity.

COMMENTS: Some of the large *Triticites* are tectonically fractured.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9620 (5)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, algal, very fine grained  
quartz in Packstone. Blue dyed epoxy cement  
displays 5% porosity.

COMMENTS: *Ivanovia* the green codiacean phylloid algae is present.  
Look for adjacent algal mound. One of the *Triticites* is silicified.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9620 (6), (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Dunbarinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Crinoid, fusulinid, bryozoan, algal, very fine grained  
quartz in Packstone. Blue dyed epoxy cement  
displays 8% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9620 (9), (10),  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, algal, very fine  
grained quartz in Packstone. No porosity.

COMMENTS: Very large *Triticites* have high fluting and the early volutions  
have slight chomata.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

## Utah Geological Survey

Slide No. f 9620 (11), (12)

1 x 3 slide with cover slip

LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA*Triticites**Pseudofusulinella*FUSULINID AGE

## PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

## PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASIONGood      Fair      **Poor**CALCAREOUS ALGAE PRESENT**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, very fine  
grained quartz in Wackestone. Blue dyed epoxy  
cement displays 7% porosity.

COMMENTS: No. 12 is a polished rock. No thin section.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9621 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, algal, pelecypod, very fine grained quartz in Packstone. Blue dyed epoxy cement displays traces to 5% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 9, 2009

Utah Geological Survey  
Slide No. f 9621 (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, pelecypod, algal, intraclast,  
very fine grained quartz in Wackestone. Blue dyed  
epoxy cement displays about 3% porosity.

COMMENTS: Very large *Triticites*.

Age date with thin sections

A. J. Wells  
Aug. 9, 2009

Utah Geological Survey  
Slide No. f 9621 (3), (4), (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Pseudofusulinella*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, algal, crinoid, pelecypod, very fine grained quartz in Wackestone - Packstone. Blue dyed epoxy cement displays 7% porosity.

COMMENTS: Very large *Triticites*.

Age date with thin sections

A. J. Wells  
Aug. 9, 2009

Utah Geological Survey  
Slide No. f 9621 (7), (8), (9)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, pelecypod, algal, Wackestone intraclast,  
very fine grained quartz in Wackestone - Packstone.  
Blue dyed epoxy cement about 5% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9621 (10), (11), (12), (13), (14)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, algal, crinoid, Wackestone  
intraclast, very fine grained quartz in Wackestone - Packstone.  
Blue dyed epoxy cement displays 4% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9622 (1), (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

**Fair**

**Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, crinoid, algal, very fine -  
coarse grained quartz in Wackestone - Packstone.  
Blue dyed epoxy cement displays 4% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9622 (3), (4)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, crinoid, algal, very fine -  
coarse grained quartz in Packstone. No porosity.

COMMENTS: Small *Triticites* with very large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9622 (5), (6), (7)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, crinoid, algal, intraclast,  
very fine - coarse grained quartz in Packstone. Blue dyed  
epoxy cement displays 2 - 4% porosity.

COMMENTS: Very large *Triticites* with chomata in early volutions.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9622 (8), (9), (10), (11), (12), (13)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, fine - coarse grained quartz in Packstone. Blue dyed epoxy cement displays 4% porosity.

COMMENTS: Two small *Schwagerina* with large proloculus. Very large *Triticites* with very large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9622 (14)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, pelecypod, bryozoan, algal, fine -  
coarse grained quartz in Packstone. Blue dyed epoxy  
cement displays 4% porosity.

COMMENTS: Large *Triticites* and *Schwagerina*.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9622 (15), (16), (17), (18), (19), (20), (21), (22)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Schwagerina*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, pelecypod, crinoid, bryozoan, algal, fine -  
coarse grained quartz in Packstone. Blue dyed epoxy  
cement displays 4% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9623 (1), (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**

Fair

Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, fine grained quartz  
in Wackestone. Blue dyed epoxy cement displays  
4% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 19, 2009

Utah Geological Survey  
Slide No. f 9623 (3), (4), (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

Fair

**Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, fine grained  
quartz in Wackestone. Blue dyed epoxy cement  
5% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 19, 2009

Utah Geological Survey  
Slide No. f 9623 (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**          Fair          Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, pelecypod, fine grained quartz in  
Wackestone. Blue dyed epoxy cement displays  
5% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 19, 2009

Utah Geological Survey  
Slide No. f 9623 (9), (10), (11), (12), (13)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Kansanella*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid , fine - medium grained quartz in  
Wackestone. Blue dyed epoxy cement displays  
5% porosity.

COMMENTS: No 13 not a thin section. It is a polished rock.

Age date with thin sections

A. J. Wells  
Aug. 19, 2009

Utah Geological Survey  
Slide No. f 9624 (1), (2)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, very fine grained  
quartz in Wackestone. Blue dyed epoxy cement  
displays 3% porosity.

COMMENTS: Small fragments of *Triticites*.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9624 (3), (4), (5), (6), (7), (8)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, pelecypod, bryozoan, very fine grained  
quartz in Wackestone. Blue dyed epoxy cement  
displays 2-4% porosity.

COMMENTS: The poor oblique section of *Triticites* looks Missourian in age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9625 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Upper Pennsylvanian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, calcareous,  
very fine grained quartz Sandstone. Blue dyed epoxy  
cement displays 2-3% porosity.

COMMENTS: Small fragment of fusulinid that shows a 2 layer wall. The tectum  
and keriotheca are present. I think it is an upper Pennsylvanian  
*Triticites*. It is not older than Missourian. The *Pseudofusulinella*  
suggest that it is upper Pennsylvanian also. No *Millerella* was found.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9625 (2) thru (13)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

**Virgilian**

**Upper Pennsylvanian**

**Missourian**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

**Fair**

**Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, calcareous,  
very fine grained quartz Sandstone. Blue dyed epoxy  
cement displays 2-3% porosity.

COMMENTS: The *Pseudofusulinella* all look upper Pennsylvanian. No  
*Millerella* was found.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 9626 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. cellamagnus*

*Dunbarinella*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

**Fair**

**Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, algal, pelecypod,  
very fine grained quartz in Wackestone. Blue  
dyed epoxy cement displays 3% porosity.

COMMENTS: Very large *Triticites*.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (1)  
**2 x 3 slide with cover slip**  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, crinoid, fine grained  
quartz in Wackestone - Packstone. Blue dyed  
epoxy cement displays 6% porosity.

COMMENTS: The *Triticites* are very large with a very large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (2), (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, very fine  
grained quartz in Wackestone. Blue  
dyed epoxy cement displays 7% porosity.

COMMENTS: Large, very long, thick wall, poorly fluted *Triticites*. One has  
fairly large proloculus. Too large to be anything but Wolfcampian.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (3)  
**2 x 3 slide with cover slip**  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, pelecypod, crinoid, fine grained  
quartz in Wackestone - Packstone. Blue dyed  
epoxy cement displays 4% porosity.

COMMENTS: The *Triticites* are very large and have very thick walls. Small  
sagital section of a *Pseudofusulinella*.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (4), (5), (6), (7)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. cellamagnus*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, intraclast,  
very fine grained quartz in Wackestone near Packstone.  
Blue dyed epoxy cement displays 6% porosity.

COMMENTS: Fusulinids all highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (8), (9),  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites cf. T. cellamagnus*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, intraclast,  
very fine grained quartz in Wackestone - Packstone.  
Trace of blue dyed epoxy cement.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey

Slide No. f 9626 (10), (11)

1 x 3 slide with cover slip

LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Dunbarinella*

*Triticites* cf. *T. cellamagnus*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good          Fair          **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, algal, bryozoan, pelecypod, very  
fine grained quartz in Wackestone - Packstone.  
Blue dyed epoxy cement displays 5% porosity.

COMMENTS: Very large *Triticites* and several have a very large proloculus.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (12), (13), (14)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Dunbarinella*

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, very fine grained  
quartz in Packstone. Blue dyed epoxy cement  
displays 5% porosity.

COMMENTS: Fusulinids are highly abraded.

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9626 (15), (16),  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation. Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, very fine grained  
quartz in Wackestone. Blue dyed epoxy cement  
displays 4% porosity.

COMMENTS:

Age date with thin sections

A. J. Wells  
Aug. 14, 2009

Utah Geological Survey  
Slide No. f 9627 (1), (2), (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, very fine grained  
quartz Sandstone. Blue dyed epoxy cement  
displays 3% porosity.

COMMENTS: Very thin 2 layer wall of elongate, highly fluted *Kansanella*.  
One *Kansanella* has very little fluting in outer volutions.

Age date with thin sections

A. J. Wells  
Aug. 8, 2009

Utah Geological Survey  
Slide No. f 9627 (4), (5), (6)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Kansanella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

**Missourian upper**

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      Fair      **Poor**

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, calcareous, very fine - fine grained  
quartz Sandstone. Blue dyed epoxy cement  
displays 1% porosity.

COMMENTS: Fragments of *Kansanella*.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24395 (1) thru (18)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Pseudofusulinella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

Wolfcampian

PENNSYLVANIAN

Virgilian

Upper Pennsylvanian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good

Fair

Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, pelecypod, crinoid, very fine grained  
quartz in Wackestone (near Packstone). No porosity.

COMMENTS: *Millerella* written on slide but none found.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (1)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Schubertella*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, crinoid, bryozoan, pelecypod, fine grained  
quartz in Packstone. No porosity.

COMMENTS: The *Triticites* are large with a large proloculus. No *Schwagerina*  
were present for positive proof of Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (2), (3)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, algal, crinoid, bryozoan, pelecypod, fine grained quartz in Packstone. No porosity.

COMMENTS: The *Triticites* are large and have very thick walls. They look Wolfcampian in age. No *Schwagerina* were present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (4), (5), (6), (7)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, algal, crinoid, pelecypod, bryozoan, fine grained quartz in Packstone. No porosity.

COMMENTS: The *Triticites* are very large and have a large proloculus.  
No *Schwagerina* were present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (8), (9), (10), (11)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**None**

ROCK DESCRIPTION: Fusulinid, bryozoan, crinoid, calcareous, in fine grained quartz Sandstone. No porosity.

COMMENTS: No *Schwagerina* were present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (12)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, algal, bryozoan, pelecypod, crinoid, fine grained quartz in Packstone. No porosity.

COMMENTS: Very large and very thick walled *Triticites*. No *Schwagerina* were present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (13), (14), (15)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, algal, crinoid, pelecypod, bryozoan, fine grained quartz in Packstone. No porosity.

COMMENTS: The *Triticites* are very large and have thick walls. No *Schwagerina* were present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (16)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation, Springville Quadrangle

FUSULINID TAXA

*Triticites*

*Pseudofusulinella occidentalis*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

**Good**      Fair      Poor

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, pelecypod, bryozoan, algal, very fine grained quartz in Packstone. No porosity.

COMMENTS: Very good thin section of *Pseudofusulinella occidentalis*.  
No *Schwagerina* present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009

Utah Geological Survey  
Slide No. f 24398 (17), (18), (19), (20), (21)  
1 x 3 slide with cover slip  
LOCATION: Oquirrh Formation

FUSULINID TAXA

*Triticites*

FUSULINID AGE

PERMIAN

Guadalupian

Leonardian

**Wolfcampian lower**

PENNSYLVANIAN

Virgilian

Missourian

Desmoinesian

Atokan (Derryan)

Morrowan

FUSULINID PRESERVATION & ABRASION

Good      **Fair**      **Poor**

CALCAREOUS ALGAE PRESENT

**Yes**

ROCK DESCRIPTION: Fusulinid, crinoid, pelecypod, bryozoan, algal, very fine grained quartz in Packstone. No porosity.

COMMENTS: The *Triticites* are very large and have thick walls. No *Schwagerina* were present for positive Wolfcampian age.

Age date with thin sections

A. J. Wells  
Aug. 18, 2009